Burnout in Healthcare: Revisited Through a Relational-Family Systems Lens

by

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Abstract

Burnout in healthcare is an ever-growing problem, especially in the aftermath of the current COVID-19 global pandemic. The effects of burnout are far-reaching with significant impact to both patients and healthcare professionals, calling into question the viability of certain professions and teetering healthcare systems globally. Current measures are inadequate for the pressures faced of many healthcare systems and its professionals experiencing burnout—this has only been further exacerbated by the pandemic. A shift needs to occur in both reframing the problem and solution through a systems theory lens, integrating a relational model of burnout. This is in part because healthcare is conducted via interprofessional teams working in hierarchical structures and in coordination to provide high quality, empathetic care to patients. This capstone thesis will aim to conceptualize both the problem and solution through a holistic systems theory lens via a relational family systems model towards the aim of a contemporary path forward in addressing burnout in healthcare.

Keywords: healthcare, burnout, systems theory, holism, family systems

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Chapter One: Overview of Burnout in Healthcare

The exponential growth of *burnout in healthcare (burnout)* in recent years is a source of serious concern. Burnout is a rapidly growing problem with severe adverse effects for healthcare professionals, patients, and the vitality of the healthcare system at large. It has been shown to be a prevalent phenomenon globally and across various healthcare roles. (Glasberg et al., 2007; Hall et al., 2016; Johnson et al., 2018; Montgomery et al., 2019; Salyers et al., 2016; Schaufeli et al., 2001; Wilkinson et al., 2017).

The literature is vast detailing the negative consequences associated with burnout's endemic nature, and include the health and safety of patients, marked financial costs due to absences or mistakes made, as well as the physical, emotional and/or psychological injury sustained by healthcare teams, including *moral injury* (Glasberg et al., 2007; Hall et al., 2016; Johnson et al., 2018; Montgomery et al., 2019; Moss et al., 2016; Patsiopoulos & Buchanan, 2011; Salyers et al., 2016; Wilkinson et al., 2017).

Moral injury describes the distress experienced by a professional when they are not able to fulfill the moral and/or ethical obligations of their role due to outside limiting factors and can have a compounding effect on staff moral conscience when experienced persistently i.e., chronically understaffed and therefore not able to provide high caliber, quality care (Moss et al., 2016).

The current pandemic puts further strain on the healthcare system, its workers, and resources, with initial reports indicating that it will be years to come before the full ramifications are understood (Morgantini et al., 2020; Zhang et al., 2021). Nevertheless, in the short term, it is apparent that the pressures of the pandemic have amplified the existing problem of burnout underlying many healthcare systems globally (Morgantini et al., 2020). Morgantini et al. (2020)

notes that “understanding healthcare professionals’ risk for burnout is critical to supporting and maintaining the quality of healthcare during the pandemic” (p. 11). The initial research on the effects of burnout intensified by the pandemic will be looked at in more detail below.

In this chapter, I will discuss the research problem and outline the salient points related to our current understanding of burnout in healthcare. In the next chapter, I will provide a high-level overview of burnout, across a global platform, and look to highlight recurring themes both in the conceptualization of the problem as it stands, the consequences, and the current routes of intervention. I will also look to survey the topics of group and systems theory. In Chapter 3, I will delve into family systems theory to provide the literature base for a new relational, systemic view of triaging and addressing burnout via a ‘two-pronged approach’, the intention of which is to advocate for a paradigm shift that might allow for us to envision the problem from a new perspective, in hopes of providing a contemporary path for creative solutions in the future.

Throughout, I will look to answer the question: Can we reimagine burnout in healthcare through a relational and holistic systems theory framework, specifically family systems, and could this be the radical solution needed to move forward in finding innovative solutions to an ever-increasing global phenomenon?

Background to the Research Problem

Life often comes full circle in a hospital, with some beginning and ending their journey at the same healthcare centre—as birth, death, and aging are inevitable parts of the human experience, our healthcare sector is in continual demand (Montgomery et al., 2019). At a unique time in our evolutionary trajectory, with life expectancy at its highest, and a rapidly growing aging-population, healthcare systems across the world are facing their largest demands to date (Salyers et al., 2016; Wilkinson et al., 2017; Wister, 2019).

The ability of a healthcare system to support its population's needs lies in its number of finite resources (Hall et al., 2016; Salyers et al., 2016). This includes, but is not limited to, the budget afforded to a department/hospital/organization, technological advancements available, and the location of the site (i.e., whether urban, rural or remote), etc., all needed to serve its population(s). However, the single-most important factor is the *human resource capital* i.e., the number of working staff within a department/hospital and their capacity at any given time. Thus, burnout can be conceptualized as a continual strain on these resources over time, and the effect to the working staff as a result (Hall et al., 2016; Salyers et al., 2016).

Moss and colleagues (2016) define burnout or *burnout syndrome* as "a work-related constellation of symptoms and signs that usually occurs in individuals with no history of psychological or psychiatric disorders" and is generally absent when they first start employment (p. 107). It is important to note that burnout is listed in the literature for other sectors, but is the most prevalent in the helping professions, with a particular emphasis within the research on 'healthcare burnout' (Hall et al., 2016; West et al., 2016).

Burnout of healthcare professionals can lead to diminished functioning in their professional and personal lives, and thus, is an issue for all healthcare staff and their loved ones in addition to the patients they treat (Glasberg et al., 2007; Montgomery et al., 2019). As the effects of burnout are so wide-spread, the growth of this problem also positions it as invariably linked with the vitality of certain professions, and thus, the optimal functioning of the healthcare system at large becomes driven by the forces of burnout i.e., the professions of nursing, medicine, etc.

Burnout is often characterized by, but is not limited to, severe emotional and physical exhaustion (including other symptom physiology that include: trouble sleeping, loss of appetite,

chronic fatigue, metabolic syndrome, etc.), a disconnection from others professionally and/or personally (patients, co-workers and loved ones); and the resulting loss of satisfaction and fulfillment, especially from one's job, which can extend reach further into one's personal life (Glasberg et al., 2007; Johnson et al., 2018). This will be elaborated on further in the following literature review.

On the extreme end of the spectrum, this can eventually lead to deteriorating mental health, including anxiety, depression, PTSD, substance use, suicidal ideations and/or attempts (Moss et al., 2016; Wilkinson et al., 2017). As much of the current research is from before the current COVID-19 global pandemic, one can assume that both the ripple effects and the number of people impacted will only continue to be exacerbated in the following year(s) as the fall-out in both the short and long-term are better understood. As mentioned, this will be expanded on below.

Within the literature, the potentially long lasting and serious negative effects on patient safety and health outcomes are the most heavily-documented aspect of burnout in healthcare. Although it has been vastly reported over the last number of decades, Hall et al. (2016) advise that current statistics regarding the number of incidents that have been directly linked with diminished patient safety due to staff burnout is likely an underreporting of the current situation "due to the complexity of trying to capture errors and adverse events within [healthcare] settings" (p. 2). They go on to cite this to be true at least in Australia and America, as well as in the UK where their systematic review was undertaken but stress the point that "similar pressures are evident in health systems elsewhere" (p. 2).

What they are alluding to is a decrease in the quality of patient care and/or an increase in errors made by burnt-out healthcare workers, which in turn have adverse effects for their patients

in a variety of ways, including negative health outcomes i.e., medication administration errors, lacking empathy when interacting with a patient at a particularly vulnerable time, etc. Not only is this providing unsafe care in the exact space that one expects the highest caliber of care, during a hospital stay/visit, but the compounding of all the downstream effects related to burnout costs healthcare systems billions of dollars annually (Hall et al., 2016; Salyers et al., 2016).

The second most-ubiquitous topic in the current research base regarding healthcare staff and burnout is 'the effect to the individual' i.e., the healthcare professional providing care. While there is significantly less research in comparison to documenting the negative effects for patients (and the associated financial costs), there is still a great deal of literature on the emotional, mental/psychological and physical strain of burnout on healthcare staff at an individual level.

Although this can be placed under the generalist category of 'effect to the individual', it is in fact a multifaceted experience. Those affected can suffer from: a diminished capacity for empathy for oneself, loved ones, patients and colleagues (Wilkinson et al., 2017), cynical attitudes at work, poor well-being and/or high anxiety/depression, increased risk of suicide (Johnson et al., 2018), increased unplanned absences and sick days (Salyers et al., 2016), unwanted physiological symptoms i.e., insomnia, fatigue, irritability (Moss et al., 2016), and moral injury, which is further defined for healthcare staff in particular as "when someone must commit or witness an act that violates their moral belief system i.e., [when] clinicians feel that their ability to deliver care is compromised by [the demands of] the systems [they work within]" (Ford, 2019, p. 125).

Moss et al. (2016) list four risk factors they deem as being directly associated with burnout in the healthcare settings: "(1) personal characteristics, (2) organizational factors, (3)

quality of working relationships, and (4) exposure to end-of-life issues" (p. 108) (note: for the intents of this paper, *the organization* in reference is i.e., a provincial health authority).

They go on to report that it is a combination of these factors that contribute to whether an individual will likely experience burnout, and to what degree. It has also been noted that certain areas within healthcare are at a higher risk than others, with critical care areas i.e., Intensive Care Units (ICU)/Emergency Departments (ED) (Moss et al., 2016), mental health support (Johnson et al., 2018), and palliative/hospice care (Montaner et al., 2021) specifically listed as high risk areas for staff. This finding is especially important for the sustainability of our profession in counselling—both as patient support as well as critical incident debrief and counselling for frontline healthcare staff. A larger discussion of the risk factors and costs to the individual as the result of burnout will be considered in the following literature review.

When looking to view the problem from a broader perspective, outwards from the individual (whether that be the patient or the provider) and into the systems they occupy, the literature becomes sparse. A 'systems theory approach' seems to be only broadly utilized when referring to the patient safety aspect as mentioned above.

In this context, while referring to the organization's finite resources that might contraindicate quality patient care and safety, there is discussion(s) that involves the limiting factors and possible solutions to overcoming such barriers on the larger organizational scale. This is in part because one can only speak of the care provided with respect to such wide-reaching areas such as a health authority, province, or country, in the broadest, systems theory terms. However, in taking such a wide lens, the nuances of the individual experiences as mentioned above are often missed or not adequately contextualized.

An exception is the work of Montgomery et al. (2019) who advocate for both organizational change as well as a deeper look into the teams that allow the healthcare system at large to function. They advocate for a dual lens that can keep the wider view of the organization present while still focusing on the individual experience (patient and provider), contextualized within the organizational culture and demands. An analysis of their work will be conducted in the following chapter.

It is the 'toggling between' these lenses, of the individual and the organization, and in creating a level between the two (of the healthcare team) with respect to burnout, that the remainder of this capstone will be focused on. In creating this additional level of analysis, of the team/department, Chapter 3 will seek to address the dialectical tension between these seemingly different perspectives: of the individual and the group.

Purpose and Research Question

The aim of this capstone is to highlight another facet of burnout in healthcare and suggest a paradigm shift towards utilizing an integrative, systems theory framework towards the concept(s) at large and in reframing it as a relational problem. This is done by proposing an alternative to our current linear conceptualization of burnout in healthcare and in advocating for holistic approaches rooted in systems theory in the future.

The present literature cites a largely intrapersonal lens in both viewing the problem and its approaches for interventions at the individual level, for example: mindfulness and resiliency training (Glasberg et al., 2007); and combines this with advocating for the need to incorporate such approaches at the larger organizational level (Brand et al., 2017) with respect to increasing staffing and budgets (West et al., 2016). However, it does not speak to the system/level that is in

between the individual and the organization: the medical unit/department i.e., the healthcare team. It is at this locus that the intervention listed in Chapter 3 will aim to focus.

To do so, the effects of burnout as they are currently understood will be explored and surveyed for options that will facilitate a perspective shift from current-state, towards a future-state that accurately incorporates all three levels and their details—one in which the areas of overlap between the individual and the organization will be explored. This will be done through a holistic, systems theory lens, specifically, family systems. In doing so, a relational model of burnout will be constructed.

The current global pandemic has ensured that the problem of burnout in healthcare will now affect society at large, and thus adds both urgency and relevance to this ongoing issue. It is worth noting that as this situation is continuously evolving in real-time, there is a greater importance towards assessing new research as it arrives. A continual, aspirational effort towards reconceptualizing the problem on an ongoing basis might lend to innovative and lasting solutions in the long term through engaging with the issue at hand with agility and adaptability.

The intended audience for this capstone is all sectors of healthcare practitioners (including operations and frontline), leaders and decision-makers at all levels, as well as the various counsellors, psychologists, psychiatrists, social workers, leadership coaches, occupational/massage/physiotherapists, family doctors etc., and loved ones who support these professionals in their various roles. For the intent of this capstone, I have chosen to group together all professions under the umbrella of “healthcare”, including but not limited to nurses, physicians, care aides and allied staff (i.e., mental health/counsellors, physiotherapists, social workers, respiratory therapists, etc.) into the general category of *healthcare professionals*. This term is being used in the broadest sense to encapsulate all roles that might provide care to a

patient throughout their life course. Due to the scope of this capstone, I have chosen to focus the following on the frontline aspect of healthcare, but the systems theory findings will highlight that the effects will ripple outward to all aspect of healthcare including operations.

All of us will eventually be affected by a burdened healthcare system, either directly or indirectly through a loved-one, and thus the need to further understand burnout is pertinent to all sectors of society. A balanced healthcare system, functioning optimally, can provide the necessary supports for an overall healthier population (Montgomery et al., 2019; Wister, 2019).

With this effort in mind, this capstone will look to address if a novel approach lies in conceptualizing burnout through a relational-family systems framework. The questions this capstone will seek to answer are:

1) Will reconceptualizing burnout in healthcare via a relational-family systems framework allow for both corrective measures and protective factors to be identified that may have not been considered?

2) By integrating all levels of the affected system(s) i.e., organization, department, individual, are we able to better understand how burnout spreads, and thus how to stop it?

3) Can this help us in moving forward with increasingly burdened healthcare systems in light of the current global pandemic?

Due to the scope of this paper, the larger levels/systems of province, country, geo-political location etc. will not be considered.

COVID-19 and The Effects of the Global Pandemic

The research is already being conducted and collected to understand how the current global pandemic will undoubtedly exacerbate the existing problem of burnout even further. The initial reports indicate the growing need to understand the enhanced risk of burnout as critical to

supporting healthcare professionals and adequately assist their efforts of providing quality patient care throughout the pandemic (Morgantini et al., 2020; Zhang et al., 2021).

In addition, the effects are being discussed with the disclaimer that long-term consequences to healthcare systems and their professionals will not be understood for years to come, but in the short-term, have shown an increase of the unwanted costs of burnout mentioned thus far (Morgantini et al., 2020; Zhang et al., 2021).

Zhang and colleagues (2021) note that, frontline healthcare workers are experiencing "unusual stressors and mental distress" as a consequence of the current pandemic and warn that the consequences of such could "last for years after the crisis [phase has passed]" (p.1). They go on to illustrate how already healthcare professionals are showing increased signs and symptoms of depression. Further to this, their work calls upon data from the SARS epidemic to highlight the possible fall-out: infected healthcare workers were at a "40.7% increased risk of PTSD" and those that were not infected but cared for sick and infected patients "continued to experience substantial long-term psychological distress" (Zhang et al., 2021, p. 6).

Morgantini et al. (2020) advise that the following were listed as some of the wide-spread challenges and consequences as a direct result of the pandemic, across at least 60 countries: disruptions to staff quality of life and/or house-hold activities including fear of transmission, "feeling pushed beyond training", first-hand and vicarious trauma from exposure to COVID-19 patients, and the excessive burden of "making life prioritizing decisions" daily, both for themselves and for their patients (Morgantini et al., 2020, pp. 6–7). They highlight how any related and existing issues within a system due to burnout could be further exacerbated by the effects of COVID-19 as the impact globally was sudden, intense and widespread.

The initial literature highlights the importance of psychological first-aid, increased organizational support, self-care strategies, and resourcing, including seeking necessary treatment, and psycho-social supports for all frontline and supporting staff throughout the pandemic and in the years following.

Positionality and Reflexivity Statement

In my current role within healthcare, I have seen firsthand the deleterious effects burnout can have on staff, and the ripple effect this creates in quality care and safety of both team members and patients alike. Throughout, I am bearing witness to the efforts being made within our organization to reduce the stigma and increase mental health support and awareness for healthcare workers by making mental health benefits affordable and easy to access, and in rebranding the issue to try and shift the current taboo surrounding such supports being utilized by healthcare professionals (Johnson et al., 2018; Moss et al., 2016) i.e., EFAP services, workshops/resources/services on mental health literacy, providing critical incident debriefs and in a timely manner, engaging in open dialogue, etc.

Nevertheless, the problem continues, and from my unique vantage point, between frontline staff and operations, I have witnessed how the efforts being made (both proactively and reactively) towards circumventing burnout are still insufficient for the pressures being placed on the system itself.

I believe part of this might be attributed to the current, widely-accepted model of viewing burnout as linear, as a clustered or independent phenomenon occurring in silos—and often in observing the problem as a largely intrapersonal one, with the system(s) only being considered at the major level of “the organization”. This contrasts with an integrative, functional systems

approach that incorporates the intrapersonal subtleties within interpersonal systems, and therefore considers the ‘systems within a system’.

I hope as a novice healthcare professional and therapist-in-training, to bring a ‘fresh set of eyes’ and an unusual perspective to an ongoing barrier for the healthcare sector at large. I believe my trajectory into the operations side of healthcare and then counselling, with a specific interest in group and family counselling and dynamics, has allowed me to reconceptualize this issue with a systems theory lens that permits for the larger context to be considered in tandem with the nuance of the details i.e., by giving context to content.

Without this degree of separation between myself and frontline patient care, I do not know that I would have been able to glean the insights mentioned throughout. I acknowledge that I can do so from the comforts of privilege, of having viewed the hardships experienced by others without experiencing many of them myself. I am eternally grateful for the dedication, hard work, sacrifices, and wisdom of the people I have met, had the opportunity to have worked with, or shared an exchange with along the way—and my team members in particular, their profound sharing and support has helped bring this capstone to life.

Writing this capstone during the current pandemic was a meta-analysis of the related themes in real-time as I watched many of the phenomenon mentioned throughout come into praxis, both for myself and those around me. While a difficult time globally, especially for healthcare teams and their staff, it has also been a time of great inspiration. I feel fortunate to have lived through the last few years anchored by the paradox of large-scale loss experienced individually and collectively, along with the beauty of witnessing the capacity of the human spirit to come together in healing, and the resiliency found in togetherness and community.

For all of those that have worked tirelessly on the frontlines throughout, in healthcare or otherwise, who sacrificed their health, personal safety, personal lives, and many moments big and small, for the health and safety of the rest of their communities, I dedicate this capstone to you.

Definition of Terms

***Burnout in healthcare (burnout)*:** Short or long-term physical, psychological and/or interpersonal negative effects characterized by not limited to emotional exhaustion, depersonalization and reduced personal achievement (Salyers et al., 2016; Schaufeli et al., 2007).

***Emotional exhaustion*:** A state of being both emotionally and/or physically exhausted by the demands of one's roles and responsibilities at work (Salyers et al., 2016; Schaufeli et al., 2007).

***Depersonalization*:** A state of being detached and/or distant from colleagues, loved-ones and/or patients that one cares for (Salyers et al., 2016; Schaufeli et al., 2007).

***Personal achievement*:** satisfaction, enjoyment and fulfillment from finding one's work meaningful and impactful (Salyers et al., 2016; Schaufeli et al., 2007).

***Healthcare professionals/workers*:** The work-force of the healthcare sector that provides care, indirectly or directly, to patients of the healthcare system (Brand et al., 2017; Morgantini et al., 2020).

***Maslach Burnout Inventory (MBI)*:** Clinical assessment used to determine if one is experiencing adverse effects due to burnout (Glasberg et al., 2007; Schaufeli et al., 2007).

***Moral injury/distress*:** the perceived sense of going against one's "moral compass" due to the limitations of one's role i.e., constraints due limited resources or insurance (Ford, 2019; Moss et al., 2016).

Compassion/sympathy/empathy fatigue: A state of being emotionally and/or physically fatigued by the desire and delivery of care to alleviate distress/suffering in another; can result in an incremental reduction of compassion over time (Moss et al., 2016; Patsiopoulos & Buchanan, 2011).

***Systems theory*:** The investigation and analysis of the interconnectedness of all things through a systems approach; the belief that any one person or thing cannot exist alone but is rather only meaningful within the context of the system(s) in which it is situated; maintains that all systems will naturally work towards homeostasis (Gehart, 2018).

***Cybernetics*:** theoretical framework; the science of communication and feedback in and between systems (Gehart, 2018; Kottler & Englar-Carlson)

***Holism*:** theory that states that the parts of a whole are inter-connected and must be viewed together to be accurately represented (Kottler & Englar-Carlson, 2015).

***Homeostasis*:** The systems natural desire and ability to rebalance after a shift/change through feedback (Gehart, 2018).

Equilibrium: The organic state that a system achieves when balanced (Gehart, 2018).

***Group theory*:** the investigation and analysis of group interpersonal dynamics (Kottler & Englar-Carlson, 2015).

2015a).

***Family systems*:** The conceptualization of families as a living system (Gehart, 2018).

Chapter Summary

In this chapter I discussed burnout in healthcare and briefly described its pervasive nature as a global phenomenon with many harmful effects. I highlighted the existing gap in the research base and literature that allows for a true, holistic view of the problem. In present-state, burnout is

often looked at from a linear and reductionist perspective and only viewed through a systemic lens when discussing specific themes i.e., organizational constraints that lead to negative outcomes for patient safety (Montgomery et al., 2019; West et al., 2016), costs associated i.e., absenteeism, high staff turnover, productivity (Wilkinson et al., 2017), degree of burnout (Schaufeli et al., 2007), the negative effects to workplace culture (Johnson et al., 2018). I also briefly touched upon the initial reports regarding the current pandemic and how it has promoted the further decay of certain healthcare structures globally that burnout had previously weakened prior to exposure to COVID-19.

Furthermore, I highlighted that there is limited research on looking at contributions and possible avenues of analyzing burnout through a systems theory lens that incorporates all the nuances of the experiences mentioned thus far, as well as the wider context these experiences are nestled within. Current research that does incorporate an interpersonal view of burnout focuses primarily on 'organizational change' and the supports needed towards circumventing the problem at this very broad level (Johnson et al., 2018; Montgomery et al., 2019).

There is unsubstantial literature on how the problem can be identified and prevented on systemically before it reaches the stage at which large scale interventions at the organizational level would need to be utilized or how a more holistic approach could be incorporated into existing structures, in moving away from a linear model of burnout. This will be looked at further in the next section.

In the following literature review (Chapter 2), I will look to define and emphasize the enduring aspects of burnout to provide an overview of the current conceptualizations. This will be done to identify both the precursors and known effects of burnout in healthcare. In effect, this will serve as a representation of the current knowledge-base and known processes of burnout in

healthcare. I will also outline the current interventions on both the individual and organizational level.

I will then examine the research that details group theory and provide the basis for linking this to family systems, as well as how this can translate to healthcare organizational culture, towards looking at burnout through a relational, system theory lens, while incorporating the middle tier, of the healthcare team and the department (I acknowledge that in praxis it is in fact more nuanced than three tiers making up a healthcare organization or hospital, but for the intents of this paper, it will serve our function as will be demonstrated below). In doing so, I will highlight that burnout is a relational phenomenon as much as it is an individual experience.

In Chapter 3, I will look to thread together these concepts towards an integrated and novel approach to addressing and assessing the rise of burnout in healthcare via a family systems framework and will introduce a ‘two pronged approach’, that may make way for a new path in our ‘new normal’.

Chapter Two: Literature Review

The issue of burnout has been well-documented since its inception into the mainstream via Maslach and Jackson's (1981) seminal work and the facets they initially outlined in defining burnout continues to endure the test of time (Wilkinson et al., 2017). In fact, the *Maslach Burnout Inventory (MBI)* is still considered the 'gold standard' for clinically identifying and assessing burnout in individuals (Schaufeli et al., 2007; Zhang et al., 2021).

The literature is vast looking at burnout as an *intra*-personal experience, originally thought to be a "medical syndrome", and it is only in recent years that the World Health Organization recognized "burnout as an occupational phenomenon, and not a medical disease" (Montgomery et al., 2019, p. 2). To date, the literature is relatively sparse in looking at burnout through a systems theory perspective.

General systems theory, or simply *systems theory*, refers to the broad area of understanding and research in which one looks to conceptualize how a group of seemingly autonomous things can work together to form a system (Segal, 1991). This is further refined into *cybernetics systems* theory "which describes how systems maintain balance or *homeostasis* through self-correction" (Gehart, 2018, p. 47). It is within this area of systems theory that we will focus on for the remainder of this paper.

In essence, viewing burnout via systems theory is to understand how burnout functions with respect to all other aspects of the system(s) in which it resides within. A further exploration of systems theory as it pertains to burnout in healthcare will be looked at more thoroughly in the following sections.

As this chapter will highlight, the problem of burnout is often viewed at either the individual level, or exclusively at the larger organizational level. Currently, there is no literature

viewing burnout through a holistic model that incorporates both facets, and further, through an interdependent, truly *inter*personal systems model, including family systems (i.e., a relational model). Via the systems theory definition above, this is to say that there is very little research on further understanding how burnout functions within the system(s) hosting it, and the changes it makes to all levels of the 'system within the system'.

In this case, the system within the system is best understood and conceptualized by viewing burnout via the descriptor of a series of concentric rings, each nestled within a larger ring i.e., creating the image that is often to referred to as a 'ripple-effect'. The rings, from the center moving outwards would be burnout; the individual (patient/provider); the healthcare team providing care; and the hospital/site or organization through which this is facilitated. As previously mentioned, these rings could keep extending to the provincial healthcare system, the national healthcare system and so on. This will be expanded on below.

Healthcare and Burnout

Although burnout has become common knowledge in the last few decades, it has often been confused with related topics like *compassion fatigue*, also known as *sympathy/empathy fatigue*, but it is a distinct concept of its own (Moss et al., 2016; Wilkinson et al., 2017). Compassion fatigue is described in the literature as being "characterized by a gradual reduction in compassion over time that results from a cumulative and persistent desire to help suffering patients" (Moss et al., 2016, p. 108). While there is considerable overlap with these related concepts, as we will later see, burnout is much more severe, both in its manifestations and its consequences. In addition, while the above can occur in one's personal life (i.e., taking care of a sick loved one), burnout, as previously mentioned, is an occupational phenomenon.

It is recognized that the "prevalence of burnout in western countries within the general working population ranges from 13-27%", but these rates rapidly increase for healthcare professionals, and in fact, working in healthcare is considered a risk factor towards an individual developing burnout in their professional lifetime (Wilkinson et al., 2017, p. 19). Wilkinson and colleagues (2017) note that estimates for clinical burnout are reported as high as 70% globally for physicians and 30-50% for nurses.

Interestingly, the burnout phenomenon has been recognized as stable across the various helping professions, countries and cultures, and has been linked with the same manifestations of mental, emotional and physical distress and accompanying symptoms, seemingly independent of an individual's role within healthcare or a country's socioeconomic status (and thus the given parameters of their healthcare system) (Montgomery et al., 2019; Salyers et al., 2016; Wilkinson et al., 2017).

In a systematic review done by Hall et al. (2016), they found that twenty-one out of thirty studies measuring burnout reported a considerable link between burnout and patient safety—they note that the initial studies were "conducted across 16 different countries and six continents" (Hall et al., 2016, p. 5). Their findings suggest that burnout is a prevalent problem world-wide, both in its wide-spread effects for the healthcare provider and the patient.

One of the most widely reported physical symptoms of burnout is chronic sleep disturbances. The literature describes how this is not only distressing for the individual, but also for their team and the quality of care provided as a whole. Montgomery et al. (2019) notes that sleep deprivation and disturbances lead to an increase of medical errors and, consequently, low ratings of patient satisfaction. Burnout has also been linked to cognitive impairments such as memory or attention deficits, which in turn, can further dampen team functioning and negatively

impact quality of patient care as the opportunities for errors increase (Hall et al., 2016; Salyers et al., 2016). In addition, the literature describes how once this occurs, it can then create a feedback loop that reinforces itself, in which the healthcare professional is distraught by the error made and/or the outcome to the patient, which in turn can create more burnout symptomology, that can then create more opportunity for errors, etc. (Montgomery et al., 2019; Salyers et al., 2016).

Moss et al. (2016) reference that errors because of burnout "appear in a bidirectional manner: errors lead to distress, and distress leads to errors" (p. 109). This in part the *cyclical nature of burnout*. The direction of influence between reduced cognitive functioning and sleep disturbances are not entirely clear, as most often these symptoms occur concurrently. However, the consequences are at best disconcerting and at worst, catastrophic. This will be discussed further in the section under 'Cost to Self' and 'Cost to Others'.

In addition, Hall et al. (2016) go on to report that both poor well-being i.e., depression, anxiety, job stress, mental health challenges, feelings of distress/high stress, etc., as well as a high degree of burnout were both found to be significantly associated with errors. In fact, healthcare professionals with both poor well-being and high burnout had higher rates of error(s) than those who suffered from either poor well-being or high burnout alone (Hall et al., 2016).

This suggests the importance of both variables as compounding factors, i.e., the levels of both the well-being and burnout of the healthcare provider effect the quality of patient care they can competently provide. Hall et al. (2016) also highlight and elaborate on an interesting finding from Fahrenkopf et al. (2008) that "96% of depressed [medical] residents were also burnt-out, but only 25% of burnt-out residents were depressed, indicating that burnout may be a possible precursor to depression" (p. 8). They propose:

> Overworked staff become burnt-out, which may eventually lead to depression. Burnout and depression both may manifest itself through fatigue, irritability and reduced cognitive functioning, all of which puts pressure on team relationships causing a poorer safety climate, and on their own individual work performance, resulting in more distanced staff, poorer quality of care and ultimately a higher risk of making errors (p. 8).

This hypothesis was also cited by Schaufeli et al. (2007) as originating from a study by Glass et al. (1993) whereby their statistical analysis produced a curious finding: "[the] structural equation model that depicted depressive symptomatology as an *outcome* of burnout, fitted their data better than the model that assumed depressive symptomatology to be the *precursor* of burnout" (p. 567). This highlights that while both are similar dysphoric states, prolonged burnout can consequently lead to depression—which only adds to the pressing nature of fully understanding burnout in healthcare.

Defining Burnout

Maslach and Jackson (1981) originally characterized "burnout as a psychological syndrome involving physical depletion, feelings of helplessness, negative self-concept, and negative attitudes toward work, life and others" (as cited in Wilkinson et al., 2017, p. 18). In the years since, it has been further refined and redefined as "an internal reaction to external stressors" due to the work environment (Wilkinson et al., 2017, p. 19).

Huhtala et al., (2015) also offer the following based on their interpretation of the work of Lazarus (1991): "whether certain situations create feelings of stress is not a property of a person or of the environment, but results from the interaction between the two" (p. 402).

Nonetheless, what is in consensus is that burnout is more than just the sum of its parts, and the three dimensions that were initially encompassed within the *Maslach Burnout Inventory*

(MBI) have remained constant: *emotional exhaustion (EE)*, *depersonalization (DP)* and *personal accomplishment (PA)* (Schaufeli et al., 2007). This *three-factor model of burnout* has been clinically validated and the MBI continues to be the optimal assessment tool towards understanding an individual's state of clinical burnout (Schaufeli et al., 2007; Wilkinson et al., 2017).

Emotional Exhaustion (EE)

EE is best understood as a state of emotional depletion, and incumbent physical exhaustion, due to chronic organizational stress or perceived reduced effectiveness in one's role and/or ability to provide quality care and is related to moral injury and compassion fatigue (Moss et al., 2016; Wilkinson et al., 2017). It is worth noting that while the downstream effects of burnout are unique, there is considerable overlap with initial stages of moral distress and/or compassion fatigue, with both often preceding burnout i.e., chronic moral distress and/or compassion fatigue can prime an individual for burnout (Ford, 2019; Wilkinson et al., 2017).

EE is widely accepted as the most obvious and ubiquitous manifestation of burnout and can lead directly to the next parameter of depersonalization (Hall et al., 2016; Salyers et al., 2016). In the initial stages, and as an early warning sign, "individuals feel emotional stress and increasing job-related disillusionment" (Moss et al., 2016, p. 107). As it is often the first indicator, much of the early research has been focused on the EE aspects of burnout, which can arise under various circumstances but is the most prevalent when a healthcare professional is under-resourced and over-extended (Salyers et al., 2016; Wilkinson et al., 2017).

For example, if the administrative demands of the role outpace the resources available, then this perceived reduced ability to provide quality care within the given constraints, and

especially repeatedly over the course of time, can leave staff drained, demoralized and emotionally exhausted (Salyers et al., 2016).

Consider this possible in-situ scenario: if nurses are working short-staffed and therefore have a higher patient-to-nurse-ratio than the norm and do not have time to properly chart between patients, over the course of a 12-hr shift, important information has the opportunity to be missed in the patients' chart that could be vital for the next shift nurse to know for optimal continuity of care—if this occurs often, it is easy to see how such a scenario could negatively affect patient outcomes and increase the professional emotional burden for staff. In addition, if one unit is short-staffed, it is likely that other areas of the hospital are as well, so the probability of such a scenario happening simultaneously in various departments/teams throughout a site increases. Considering both sets of systems—the unit and the hospital—one can start to form the systems theory perspective of how emotional exhaustion can have grave consequences within a healthcare organization or system at large.

Depersonalization (DP)

When a care provider is in a state of emotional exhaustion, they are "over-extended and [therefore] unable to offer emotional support to others", which can lead someone who was once very empathetically connected to their patients, *depersonalizing* them as just that, patients (Wilkinson et al., 2017, p. 19).

DP manifests as an "unfeeling and impersonal response towards [the] recipients of one's care" and can be further exacerbated by negative cyclical attitudes towards the responsibilities of one's role, institution, and/or the healthcare system at large (Wilkinson et al., 2017, p. 19). This cyclical nature of burnout, at each level of the system, will be revisited throughout.

Wilkinson and colleagues (2017) found it is this depersonalizing aspect of burnout that leads to a decrease in empathy. They note that Rogers (1957) characterized *empathy* as the ability of the care provider to sense a patient's "private world as if it were their own, without losing the 'as if', hypothetical quality" (as cited in Wilkinson et al., 2017, p. 19). Thus, either detaching completely i.e., depersonalizing from the patient's suffering, or becoming enmeshed with their suffering, can be considered an 'impairment' to this schema.

Enmeshment is a concept borrowed from family therapy. Gerhart (2018) describes it as a strong "sense of mutuality and connection at the expense of individual autonomy" (p. 137). When this occurs, the boundaries between oneself and the other become diffused—a potentially easy step for a highly empathetic professional connected and committed to providing compassionate care to a patient that might have already lost their autonomy. It contrast, depersonalization, is a step in the opposite direction, with disengaged and rigid boundaries.

As such, it can then be understood that: depersonalization because of burnout actively disrupts the working mental construct that we know as 'empathy'. In essence, the emotional exhaustion of burnout can deplete the system and push its current standard of empathy (at the center point) to one extreme of the spectrum—depersonalization (if complete enmeshment were the other extreme). Empathy and its relationship to burnout will be addressed below.

Reduced Personal Accomplishment (PA)

It is easy to see how a state of emotional exhaustion, coupled with depersonalization, can lead someone toward reduced *personal accomplishment*, which is defined by Maslach (2003) as "involving a negative view of oneself", which in turn can cause increased further emotional exhaustion (as cited in Wilkinson et al., 2017, p. 19). Again, we see how multifaceted the

cyclical nature of burnout can be. In turn, we can start to construct an 'equation' as a cognitive aid towards understanding and conceptualizing burnout:

$$Burnout = EE + DP \rightarrow reduced\ PA \rightarrow \infty$$

Through the three-factor model of burnout, the processes of burnout can be viewed as a series of maladaptive coping responses to an increasingly burdened healthcare system (Montgomery et al., 2019). This aligns with the systems theory perspective of *homeostasis*, which is the tendency of a system to self-correct towards equilibrium via feedback (Gehart, 2018). This will be further looked at in the following sections.

Implications

Burnout has many repercussions for healthcare providers. Montgomery et al. (2019) report that not only is burnout associated with chronic sleep deprivation and cognitive disturbances as mentioned above, plus the rebounding negative effects to quality patient care, but they go on to identify that failing to resolve burnout within an organization can result in "higher staff turnover, lost revenue associated with decreased productivity, financial risk, and threats to long term viability" due to the overall impact to patient care and safety (p. 1).

This highlights how if patient and administrative demands outpace resources available, the probability of burnout increases rapidly, which then leads to more burnout as resources become even further extended (i.e., as the system tries to re-establish homeostasis, further strain creates further burnout) (Hall et al., 2016; Salyers et al., 2016). This is reflected in the 'burnout equation' created above, i.e., $\rightarrow \infty$.

The literature has referred to this as burnout's "contagion effect", in which it can spread through a healthcare team, department, organization and even a healthcare system (Moss et al., 2016; Salyers et al., 2016). It is likely in part due to this contagion effect that we are going to see

burnout on the rise in the wake of the current pandemic, for healthcare systems across the globe (Morgantini et al., 2020).

What does this mean for the health of a population, when multiple health organizations (i.e., *health authorities* in our provincial context) are all suffering from wide-spread burnout concurrently?

In addition, Wilkinson et al. (2017) found that there was evidence towards a negative association between burnout and empathy—as one's burnout increases, one's level of empathy decreases. They even go on to cite that there is a positive correlation between the two as a risk factor: the more empathetic a healthcare professional is, the more likely they are to develop burnout. Thus, a healthcare provider who is very attuned to their patient's suffering could be more impacted by the emotional burden they experience as a function of their increased capacity for empathy. This is in addition to any emotional exhaustion experienced due to the outpacing of resources. Therefore, the burnout equation mentioned above, could be further conceptualized as:

$$Burnout = High\ empathy + low\ resources \rightarrow EE{+}DP \rightarrow reduced\ PA \rightarrow \infty$$

This finding is disturbing not only on the intrapersonal level with respects to the toll this can have on one's mental health as healthcare professionals but is especially concerning in a healthcare environment that greatly benefits from a compassionate stance on human suffering. *Compassion*, in addition to empathy, is recognized as a necessary component in providing quality care (Glasberg et al., 2007; Patsiopoulos & Buchanan, 2011). These terms will be further defined below.

The above findings ask questions of how one can care for another effectively when struggling to do the same for themselves, and further to this: how do we keep caring individuals, who are attracted to the helping professions by this very nature, from becoming become burnt-

out and disengaged from their vocation and the patients they care for, and therefore less empathetic?

Johnson et al. (2018) found that mental health staff in particular needed to be mindful of this double-bind: in putting their patients/clients health and wellbeing before their own, staff run the risk of burning out more quickly, especially when considering the emotional labour and potential violence they are subjected to (vicariously or otherwise). Their work highlights the importance of all clinicians, including counsellors in training, learning both proactive and reactive measures they can utilize in their own career trajectory to reduce future burnout.

Cost and Safety

It is estimated that burnout costs the healthcare systems billions of dollars annually (Hall et al., 2016; Salyers et al., 2016). This is in part because of the cyclical nature of burnout and how it causes further strain to the system (i.e., department, hospital or healthcare system at large), thus creating further burnout for its employees.

The financial cost of burnout is associated to lost productivity due to unplanned absences and increased sick time, and thus increased pay due to short-staffing and overtime expenditures, as well as high turnover and costs associated with recruiting and training new staff (Johnson et al., 2018; Salyers et al., 2016). In effect, in a system that is over-burdened and/or under-resourced, burnout will start pulling resources inward towards itself and away from staff and patients.

Further to this, burnout is associated with poorer overall health outcomes for healthcare professionals (Salyers et al., 2016). Honkonen et al. (2006) noted that “the prevalence of diseases increased with increasing severity of burnout” (as cited in Johnson et al., 2018, p. 24). It stands to reason then, that for each healthcare professional that must take medical leave and receives

treatment due to burnout, either due to physical or psychological health problems, a 'double-dose' effect occurs i.e., not only is this one person subtracted from the pool of would-be care-providers but it is also one person added to the growing pool of 'care-receivers' i.e., patients. The healthcare system is strained twice-fold by the same event occurring.

This could also contribute to the contagion effect of burnout: reducing organizational functioning and the available workforce simultaneously, while increasing the number of patients accessing care.

In addition to the financial costs, the scenario provided earlier (nurse(s) working chronically short-staffed) illustrates how staffing shortages and excessive workload can affect safety and quality of patient care. This can be further exacerbated by inconsistent and/or inadequate leadership, whether a hospital site is in a rural/remote or urban location, if there is a lack of opportunity for skill development and advancement, and/or a lack of support (organizationally and within teams) (Glasberg et al., 2007; Johnson et al., 2018).

Thus, the costs associated to burnout include financial costs incurred by the healthcare system, costs to the healthcare providers' own health, and the various costs, financial and otherwise, that contribute to negative outcomes for patient care.

Cost to Self. The literature supports that the cost to self (i.e., the healthcare provider) is steadfast and widespread, extending its effects physically (Salyers et al., 2016), psychologically/mentally (Wilkinson et al., 2017), emotionally (Johnson et al., 2018), and interpersonally (i.e., relationships) (Salyers et al., 2016; Wilkinson et al., 2017).

Salyers et al. (2016) consolidates these findings accordingly:

> Workers with burnout experience physical health problems (e.g., insomnia, headaches, poor overall health), relationship problems, reduced job satisfaction, and increased mental health problems (e.g., depression, anxiety, substance use). (p. 475)

Common physical symptoms include insomnia, headaches, muscle tension, gastrointestinal problems, chronic fatigue, and loss of appetite (Moss et al., 2016; Salyers et al., 2016). It is interesting to note that most of these are generalizable symptoms that can be often overlooked for other conditions and/or increase slowly over the course of time.

Common psychological/mental health symptoms of burnout include brain fog, disruptions to cognitive functioning, memory, and/or attention, increased feelings of frustration, anger, anxiety/fearfulness and depression (Hall et al., 2016; Moss et al., 2016; Salyers et al., 2016).

As alluded to earlier, Hall et al. (2016) identifies that wellbeing and burnout play a tandem role, illustrating the importance of both variables for the overall health of the individual i.e., high welling and low burnout. Johnson et al. (2018) describes *well-being* as "a holistic concept that encompasses facets of mental health, physical health, and stress [levels/management]" (p. 20).

In addition, as previously mentioned, research notes that depression can be an outcome of burnout, rather than as a precursor to it as initial research may have suggested (Schaufeli et al., 2007). Schaufeli et al. (2007) stress the importance of understanding both as distinct concepts, not as interchangeable terms, but rather as conditions having considerable overlap in presentation i.e., irritability, anxiety, guilt, helplessness, fatigue, and thus, advocate for all clinicians to be well-versed in the warning signs, both in themselves and their colleagues.

Salyers et al. (2016) also noted marked attention deficits and impairment to cognitive functioning in affected staff, as mentioned earlier. Johnson et al. (2018) adds that reduced memory, attention span and decision-making skills resulted in poorer judgement and informalized decision-making processes where staff "rely on heuristics and cognitive biases", thus further compromising the safety of care provided (p. 25).

One can also assume that any physical, mental and emotional impact from burnout in the work sphere, will also have an impact on one's personal life including quality of life and personal relationships. In fact, Glasberg et al. (2007) advise that "the influence of negative spillover between work and family is well-documented", and thus adds another layer of complexity for both the problem and the solution (p. 400).

The emotional/interpersonal impact of burnout within the individual can present itself as: withdrawing from patients, colleagues and loved ones, loss of job satisfaction, loss of life satisfaction, deterioration of close intimate relationships and increased recklessness/volatility that can present itself as substance use or endangered driving, just to name a few examples (Johnson et al., 2018; Moss et al., 2016; Salyers et al., 2016; West et al., 2016).

Not only does this have impact to the individual through, for example, the loss of function in their support system, but it also creates an unsafe work environment in a field where trust and cooperation is essential to effective and timely patient care i.e., in an ICU or ED when a patient's heart stops beating and the care team needs to mobilize into action quickly. The impacts of burnout on team dynamics will be looked at in full in the following sections on group dynamics and is briefly touched upon below in 'Cost to Others'.

While the scope of this capstone does not allow for a full analysis into all the manifestations and the associated costs to the individual healthcare professional because of

burnout, the above illustrates how the effects to one's health can be nuanced and multi-faceted. A variety of physical, mental and emotional symptoms and their downstream effects are listed in the literature to support that burnout is very intra-personally costly. Due to the breadth of this topic, I have chosen to highlight the most common and ubiquitous ramifications of burnout to the individual, but by no means is this an exhaustive list.

More severe consequences and phenomenon that are worth-noting but beyond the means of this capstone include Post-Traumatic Stress Disorder (PTSD), vicarious/secondary trauma and suicidality (Moss et al., 2016; West et al., 2016).

PTSD and vicarious trauma can be due to trauma from "one catastrophic event or from repeated chronic exposure to traumatic events" (i.e., working in an emergency department can expose one to the trauma of a patient's illness/catastrophic injury and/or repeated exposure to i.e., death, dismemberment, etc.) (Moss et al., 2016, p. 109). Moss et al. (2016) report findings that 22-29% of critical care nurses show symptoms of PTSD, and ~18% "meet the diagnostic criteria for PTSD; almost all of the nurses (98%) with PTSD will also have symptoms consistent with BOS [Burnout Syndrome]" (p. 109). Sadly, the literature supports that trauma of any kind increases the risk for an individual to attempt or complete suicide (Moss et al., 2016; West et al., 2016). This adds urgency to the findings mentioned by Morgantini et al. (2020) and Zhang et al. (2021) regarding frontline workers and their increased risk of PTSD as a risk of the current pandemic.

Furthermore, we are collectively moving through the trauma of the current pandemic, both as healthcare and mental health professionals and as society at large, and thus this further highlights the need for our continued attention to this topic, and for our support of the healthcare system towards our collective healing in the coming years.

Cost to Others. The literature also supports that burnout is also *inter*-personally costly in several ways. In addition to the physical safety of patients, it has implications for the psychological safety of healthcare teams where high burnout is present, for example, critical care areas (Glasberg et al., 2007; Moss et al., 2016). Hall et al. (2016) summarize that "a work environment that fosters staff wellbeing and [therefore] protects against burnout, subsequently provide[s] a safe service to their patients" (p. 8). Psychological safety for team members will be further discussed within group dynamics in sections below.

In terms of the psychological climate for the patient, we can easily see how patients and healthcare professionals are two sides of an interface, each nestled within their own subsystem of *care-provider* and *care-receiver*, with interacting factors across the interface. In the simplest terms, this interaction is an exchange of empathy:

> Empathy bridges the gap between self-experience and that of others…[thus] irrespective of the particular dimensions or definition [of empathy, it] can be viewed as an important component of the staff-service user relationship, and subsequently crucial to ensuring the delivery of quality care (Wilkinson et al., 2017, p. 19-20).

Further to this, "empathy is recognized as a necessary component to the therapeutic alliance" and is often correlated with another related topic: compassion (Patsiopoulos & Buchanan, 2011, p. 301).

Compassion is described by Gilbert (2009) as: "a basic kindness, with a deep awareness of the suffering of oneself and others and with the desire to relieve it" (as cited in Patsiopoulos & Buchanan, 2011, p. 301). Patsiopoulos & Buchanan (2011) go on to differentiate the two and emphasize that both are needed in any interaction in which care is being provided as compassion is the pro-social behavior, not empathy, as is commonly misunderstood.

In effect, a care-provider needs access to their empathy to have the compassion required to take care of patients to the best of their abilities over continued periods of time, and to create a safe space to this end that accurately respects the patients' inherent vulnerability. This also extends to the team environment where having empathy and compassion allows staff to take care of each other in high stress environments and function cohesively towards the goal of excellence in patient care. To this end, relationships between team members will be expanded upon in following sections.

When viewing the healthcare system through this systemic lens of the individual and team, working across an interface across which empathy is extended and compassion is utilized as a "profound agent of healing", we can clearly see how any 'cost to self' that dampens or inhibits empathy in a care-provider will undoubtedly increase the 'cost to others', including the populations they serve (Patsiopoulos & Buchanan, 2011, p. 301).

Risk Factors

With a problem as large and complicated as burnout, the risk factors are endless and vary from one individual to the next, depending on the context, duration, and an array of other variables. As previously mentioned, Moss et al. (2016) described four risk factors as associated with an individual developing burnout:

(1) personal characteristics,

(2) organizational factors,

(3) quality of working relationships, and

(4) exposure to end-of-life issues (p. 108).

Examples of personal characteristics include the tendency towards perfectionism, high expectations of self and others, and overcommitment. They note that paradoxically "these qualities often occur in the best and most productive employees" (Moss et al., 2016, p. 108).

Organizational factors can be further broken down into:

(1) increasing workload,

(2) lack of control over the work environment,

(3) insufficient rewards and

(4) a general breakdown in the work community (Moss et al., 2016, p. 108).

While these facets could be different from one role to another within the same organization i.e., nurses versus physicians, the overall 'health of the organization' readily influences all of these areas and creates a composite of the work environment, as well as the internal reference point from which a healthcare professional is extending care. This could be further exacerbated by any under-resourcing and/or staffing issues/turnover that is present in conjunction to these organizational factors and personal characteristics i.e., provincial nursing shortage.

With these first two areas considered together, we can understand how they can either negatively contribute to or ameliorate the effects of the last two factors: quality of working relationships and exposure to end-of -life issues.

A good fit of personal characteristics and organizational factors can create improved quality of working relationships (i.e., team and organizational culture). On the other hand, conflicts and poor working relationships can exacerbate any underlying dysfunctions, both for the team and the individual i.e., cause more stress that can bring forward any underlying physical or mental health concerns and/or symptoms of burnout (Moss et al., 2016).

Team culture and dynamics are repeatedly listed as both a risk factor and a preventative measure towards burnout (Glasberg et al., 2007; Moss et al., 2016). How this can be utilized as an intervention will be detailed in Chapter 3.

When all three factors are aligned towards supporting an individual in their role, they are better prepared at handling repeated exposure to end-of-life-issues (Moss et al., 2016). While in most cases, this will be an inevitable part of a healthcare professionals experience at some point in their career, adequate support through the first three factors can provide the space to process such events with supportive team members or outside clinicians in a timely manner (Moss et al., 2016).

This type of ongoing emotional support, even in the absence of critical events, is vital to the emotional and mental health of the individual and the team at large and could provide a key to unlocking burnout further (Glasberg et al., 2007; Moss et al., 2016; West et al., 2016). This will be further discussed in the following sections.

While Moss et al. (2016) were speaking specifically for those that serve critical care areas, it stands to reason that the risk factors they listed could easily be extended for all healthcare professionals, with an *increased* risk when caring for critical care patients. As previously mentioned, the area of care a healthcare professional works within is considered an additional risk factor with critical care areas, mental health support, and end of life care i.e., hospice/palliative care being listed as high risk areas (Johnson et al., 2018; Montaner et al., 2021; Moss et al., 2016; West et al., 2016).

Another often minimized driver for burnout is the inevitable parameters of shift work and the associated sleep disruption this causes on its own (Moss et al., 2016; West et al., 2016). As mentioned earlier, sleep disturbances and insomnia are considered some of the early warning

signs and most widely reported physical symptoms of burnout. The direction of the relationship between shift work, sleep, and burnout is unclear, but one can assume that as sleep deteriorates, the chance of burnout increases. This could also provide the basis of individual-focused interventions, as discussed in the next section (i.e., psychoeducation on sleep hygiene, CBT-i (CBT for Insomnia)). As sleep is widely considered one of the 'three pillars of health', along with diet and exercise, this will not be further discussed in the interventions expanded below, as it will be considered the initial standard intervention.

Further to this, Johnson et al. (2018) identifies that for staff working in mental health sectors, additional risk factors can include violence witnessed or against staff, involuntary detentions, exposure to suicide and any underlying mental health struggles within staff that might have called them to the field in the first place.

They note that often, mental health "staff [in particular] are exhorted to use their lived experience as a 'tool' to understand and relate to patients" (Johnson et al., 2018, p. 23). While this likely make staff more empathetic and able to engage with patients who are suffering or in serious distress, it also raises questions on how to maintain staff wellbeing so as not to push them towards emotional exhaustion by virtue of the very thing that makes them the most effective at work in the first place. This circles back to the double-bind mentioned earlier regarding the link between highly empathetic individuals being at an increased risk of burnout due to their increased capacity to connect with another's suffering.

Again, this brings forward the question of not only how to protect individuals, organizations, and the patients they serve, but also how to protect the helping professions at large from the strong-holds of burnout.

Current Interventions

The current interventions to reduce burnout has been primarily focused within two levels: the individual/intrapersonal level and the larger level of the organization staff work within. The current research supports a dichotomy of how interventions are presently utilized: interventions to help individuals move towards adaptive coping strategies for their environment (individual) versus interventions to enhance the working environment (organizational) (Moss et al., 2016).

Individual/Intrapersonal Interventions

The literature is rife with recommendations for changes at the individual level of dealing with or preventing burnout. While there are slight variations and preferences for the particulars involved, as well as the proposed responsible party to enact said interventions (i.e., personal accountability on the individual versus organizational responsibility to provide ongoing training, support, and the time to participate in such engagements), all heavily revolve around the themes of *stress reduction, psychoeducation* (particularly in *self-compassion* and *self-care*)*,* and *psychotherapy.*

Stress Reduction. While earlier research highlights the importance of reducing maladaptive coping strategies towards successful stress reduction, later research highlights the importance of building capacity in mindfulness, resiliency and self-compassion.

Mindfulness-Based Stress Reduction (MBSR or simply known as *mindfulness)* is used in various fields and for a variety of stress-disorders including anxiety and PTSD (Mealer et al., 2014). It is often utilized to help people develop a keen awareness to the present moment, via non-judgement and acceptance, which over time can assist in reducing negative affect and help individuals move towards adaptive coping of situational stresses (Johnson et al., 2018; Mealer et

al., 2014; Moss et al., 2016). Most often, within the context of burnout, MBSR techniques are often taught in tandem with resiliency training.

Resiliency training refers to a broad approach towards both dealing with burnout in the present and in preventing it in the future through a variety of adaptive coping strategies (i.e., MBSR, support systems, expressive writing, exercise, spiritual practices, etc.), increasing agility in stressful work experiences, and maintaining positive affect in the face of adversity (Johnson et al., 2018; Mealer et al., 2014; Moss et al., 2016).

Moss et al. (2016) go on to describe resiliency as "a multidimensional characteristic that allows an individual to thrive when faced with complexity and high rates of change" (p. 110). For such techniques to be effective, researchers advocate for clinicians to be well-trained in how to recognize risk factors of burnout in themselves and others, and how to ask for and receive help when needed (Johnson et al., 2018; Mealer et al., 2014; Moss et al., 2016).

As such, in can be inferred then that self-awareness and a willingness to engage in activities that promote psychological flexibility (i.e., mindfulness and resiliency) are a necessary requirement for any stress reduction technique to be effective.

Mealer et al. (2014) found that specific factors can encourage resiliency including having a positive support system, introspection to one's physical, emotional and mental states, and the continued development of active coping skills. Further to this, they found that MBSR techniques such as body scan and sitting meditation in conjunction with exercise, expressive writing, and Cognitive Behavioural Therapy (CBT), all as part of an intensive resiliency training program, can be effective for ICU nurses struggling with PTSD. While they note that further research is required to refine the offerings to be cost and time effective, they affirm the baseline required that much other research builds upon.

Johnson et al. (2018) confirms these findings and report that multiple studies show that mindfulness interventions in clinicians suffering burnout has shown marked reduction in burnout symptoms, improved relaxation and life satisfaction. However, they do note the caveat that "outcome variables affected may vary according to the specific type of intervention delivered" (Johnson et al., 2018, p. 27).

Moss et al. (2016) report similar findings and advocate that a variety of interventions should be offered that can then be selected based on individual needs and preferences, including psychoeducation. While they do advocate for organizationally provided funding and access for staff to participate in said training, they also support that healthcare professionals have a personal responsibility for maintaining their own health (physical, mental and emotional) (Moss et al., 2016). They go on to advise that the following should be considered the foundations for resiliency building and training: adequate self-care, ensuring adequate rest, spiritual practices, exercise, meditation, and hobbies outside of the work environment (Moss et al., 2016, p. 11).

This foundation can then be bolstered by further supports via psychoeducation and training staff on additional skills such as work-life balance, limit setting, and time management skills (Moss et al., 2016). Further to this Rus et al. (2020) advocate for adequate *work recovery* for staff:

> The cognitive, emotional and physical resources one individual can invest in their work are limited and should be replenished daily, after work, by engaging in activities that requires a different set of resources. Work recovery is…about replenishing ones' resources so that the individual is protected from the adverse effects of occupational stress on ones' wellbeing. Furthermore, recovering from work not only helps individuals

> by repairing negative strain effects, but can also catalyze the activation of job resources (Rus et al., 2022, pp. 166).

Rus et al. (2022) describes *job resources* as the internal resources one needs in order to perform work duties—that which is being depleted at an exponential rate when burnout is present.

However, this seems to be much more difficult to maneuver as a healthcare professional. Rus et al. (2022) report that on average, healthcare professionals have less time 'down-time', longer working hours, and shorter amounts of sleep than the general working population. Combined, this results not only in high burnout and increased job strain, but fewer opportunities to "replenish and activate their job resources through work recovery" (Rus et al., 2022, pp. 167). This paints a startling picture of another double-bind: healthcare professionals in particular could benefit from increased work recovery this could be a protective factor against burnout but are often hindered from being able to utilize it to their advantage due to the parameters of their roles.

Thus, this identifies how pertinent of a shift is needed, in both the culture and administration of healthcare as it currently understood in order to protect its human resource capital. A realistic and pragmatic solution might be in the way of assuming this be a joint responsibility between all parties involved i.e., society and the healthcare sector/decision and policy makers; the healthcare sector/decision and policy makers and the organization; the organization and the healthcare professional.

Psychoeducation: Self-Compassion and Self-Care. In addition to the stress management skills mentioned above, research also highlights the importance of cultivating *self-compassion* and *self-care practices (*i.e., the practice of taking care of yourself the way you would another, as an extension of self-compassion) (Moss et al., 2016; Patsiopoulos & Buchanan, 2011). In tandem with the need for psychoeducation on the parameters of burnout and

its ‘red flags’, the ‘green flags’ for wellness and psychological/emotional flexibility and how to recognize and achieve them need to be discussed as well.

Patsiopoulos and Buchanan (2011) build on the distinction mentioned earlier, in highlighting the difference between empathy and compassion, two qualities often thought of as synonymous with healthcare professions and their staff. They illustrated that it is compassion, not empathy, that incorporates the motivational drive towards change. As such, they advocate for building self-compassion, the desire to alleviate one’s own suffering much in the same way that most healthcare professionals desire to alleviate the suffering of their patients, as a key component of avoiding burnout (Patsiopoulos & Buchanan, 2011).

Psychoeducation on such topics and related resources have also been listed as possible interventions that can be utilized at the individual level and can be adjusted broadly at the organization level i.e., individuals can seek out said workshops outside of their employment and/or engage on an individual level to broad offerings via the organization (i.e., workshops).

Psychotherapy. The literature also supports healthcare professional in their use of psychotherapy both as an ongoing preventative measure towards the intrapersonal costs identified above, as well as a reactive intervention once symptoms of burnout start to present. In particular, the use of *cognitive behavioural therapy (CBT)*, as mentioned above in resiliency training, has been noted as a recommendation due to its significant research base as an evidence based therapy (Butler et al., 2006).

CBT refers to a branch of cognitive therapy that is built on the premise that our thoughts control our feelings, and our feelings control our behaviours (Beck, 1993). It is widely regarded as one of the most extensively researched and empirically validated forms of psychotherapy (Butler et al., 2006). While it might not be enough to combat all aspects of burnout, it can

potentiate any other interventions by assisting with the day-to-day strain of anxiety and/or depression symptoms brought on by chronic burnout.

In turn, the incorporation of CBT-based cognitive techniques, with mindfulness and resilience strategies, as well as compassion for self and others, makes *acceptance and commitment therapy (ACT)* also a new preferred recommendation. ACT is often considered part of the 'third wave' of behavioural therapy, coming into the mainstream after CBT (Hayes, 2004; Springer, 2012). It borrows from spiritual eastern traditions and incorporates mindfulness based approaches into mental health treatment and does not assume that the goal of treatment is to control anything outside of one's own sphere of influence (Springer, 2012).

In turn, it is becoming a more contemporary choice to CBT as it offers an "adaptive [coping] style to face the challenges associated with the job", many of which are beyond the individual's control (Montaner et al., 2021). Montaner et al., (2021) also note that "coping strategies based on the experiential avoidance of emotions, thoughts, and unpleasant sensations usually [results in] higher stress levels" and thus put individuals at an increased risk of burnout (p. 1).

An underlying principle of ACT is to provide an alternative to maladaptive avoidance, and to create *psychological flexibility,* which enables an individual to connect fully to their internal experience without judging, resisting or the having the desire to change it. For example, healthcare workers with high psychological flexibility reported greater job satisfaction and were shown to be in better physical and psychological health (Montaner et al., 2021).

Organizational Interventions

The literature also cites the need for shifts in the level of organizational change in response to wide-spread burnout on a global scale (Brand et al., 2017; Montgomery et al., 2019).

As much of the early literature is on the above-mentioned individual-centered approaches to circumventing burnout, newer research advocates that this alone cannot solve the problem. Montgomery et al. (2019) summarize their findings:

> The most common responses have put the responsibility on healthcare professionals to take better care of themselves, become more resilient, and cope with stressors on their own. But such individualistic approaches can ignore the sources of chronic stressors in the workplace such as incivility, staff shortages and austerity measures, which are often beyond an individual's control. The exhaustion, cynicism, and consequent feelings of inefficacy experienced by people with burnout are often a shared experienced in response to shared job stressors, and we should frame it as a systems problem, and not simply as an individual one (p. 1).

It is the call to action proposed by Montgomery et al. (2019) that has heavily influenced the progression of this capstone thesis, as will be discussed below. Their research highlights how placing the burden on the individual can in fact compound the problem and lead to more dysfunctional coping within the healthcare system, towards a culture that promotes "inappropriate self-care and the avoidance of emotionally challenging events" (Montgomery et al., 2019, p. 1).

They recommend that organizations focus their resources on interventions that promote healthy workplace culture, in addition to evaluating for burnout as part of regular healthcare quality assessments (Montgomery et al., 2019). They also advocate this should be done with both staff and patient input, and that "burnout should be assessed at the department or unit level" (Montgomery et al., 2019, p. 2). It is this last recommendation that Chapter 3 will be based upon.

As a basis for assessing whether individuals, and interventions, would be a good fit within an organization with respects to burnout, Montgomery et al., (2019) refer to the *worklife model,* first introduced by Leiter and Laschinger (2005) and the six areas of ideal match needed that could provide "a structured approach to organizational predictors of job burnout" (Leiter & Maslach, 2003, p. 91). Montgomery et al., (2019) expand that these areas are: "workload, control, reward, community, fairness, and values" (Montgomery et al., 2019, p. 2). Mismatches in any of these areas can contribute to an individual's level of burnout, and that "the greater the match, the greater the likelihood of resilience and engagement" (Montgomery et al., 2019, p. 2).

The sense of community that is fostered can itself be a large scale organizational intervention, and Montgomery et al. (2019) note this is because "healthcare organizations are social communities…[and] relationships that are characterized by a lack of support and trust, and by unresolved conflict, all mean a great risk of burnout (p.3).

However, it often seems that the case for organizational change is made by expanding the individual centered interventions on large organizational scales i.e., in offering wide-spread psychoeducation/stress reduction workshops for an entire organization. Further to this, while much of the literature on the 'big picture' advises the importance of all that is mentioned above, there is little research on what the praxis of these tenants would be. Future research is required to better understand how interventions aimed at the organizational level can find the balance between efficacy and cost-effectiveness (Brand et al., 2017).

Brand and colleagues (2017) note that there is evidence of a "dose-response effect" in which increased participation within an organization in activities towards reducing burnout resulted in increased reduction of burnout (Brand et al., 2017, p. 20). They note that rigorous

buy-in that starts top-down is strongly correlated with positive impact to staff and team culture (Brand et al., 2017).

This highlights the importance of engaging stake-holders at all levels of the system: the individual, the team, department leaders, and senior leadership of a hospital, site and organization i.e., health authority, all the way to provincial healthcare decision makers. At the extreme level, this can then be extended to national decision makers, society and healthcare culture at large—especially in light of the findings thus far, that burnout is a global phenomenon, quickly on the rise, even before the COVID-19 pandemic.

Brand et al. (2017) also advocate for a range of interventions that include both individual and larger team based initiatives. They highlight the consensus in current research that no one single intervention on its own is likely to have a successful impact towards treating or preventing burnout, and thus interventions need to be considered holistically from the "environmental culture to the individual practitioner" (Moss et al., 2016, p. 110).

Thus. the newer, current rhetoric on 'organizational change' in response to burnout focuses on the importance of workplace culture and includes recommendations to investigate funding and initiatives towards staff retention and a positive work environment, including easy and convenient access to the person-centered interventions mentioned above, including psycho-education workshops and small-group discussions or debriefs as part of a general ethos of a supportive community built upon caring and providing for both its patients and staff alike (Brand et al., 2017; Johnson et al., 2018; Montaner et al., 2021; Morgantini et al., 2020).

Bridging the Gap—A Systemic Approach

As noted thus far, the literature supports the notion that burnout is a "cross-cultural construct"—research from all over the world report on similar findings, indiscriminate of

healthcare system or role (Wilkinson et al., 2017, p. 27). Nevertheless, there is no model to date that offers both a conceptualization and solution integrated into a holistic approach via a relational model.

In partial answer to this, Montgomery et al. (2019) urges for a perspective shift from the individual to the larger "systems problem" at hand, "a shared problem", citing that much of the current rhetoric urges the individual practitioner to make changes instigated by their internal desire to seek change (p. 1) (see above). As previously highlighted, this is a traditional 'first-wave' approach to burnout and is a *reactive measure* (versus a *proactive measure*) which conflicts with the teachings until till now: that burnout can be a precursor to depression, and that both can create a detachment from self and others, all of which can reduce likelihood and desire to seek help (Schaufeli et al., 2007; West et al., 2016). The 'second wave' approach was in response to findings that individual approaches alone were not enough to circumvent the problem, and thus large-scale organizational interventions were introduced.

Montgomery et al., (2019) advocate for an investigative approach to tackling burnout within an organization, by examining "each unit within an organization to understand key systems drivers" (p. 2). This is on the basis that an organization is built-upon and managed by semi-autonomous work teams with leaders that are held accountable for large groups of people. As such, they suggest that an evaluation of a team on such factors such as productivity, turnover, and patient safety (i.e., metrics of quality and patient safety assessments) can provide useful data towards assessing burnout in staff for a given department. To bolster this, they note that in the literature outside of burnout in healthcare, in conceptualizing it within other sectors, it is most meaningful when burnout is measured across a team or department— "because burnout is a

social phenomenon rooted in the relationships that people share in work teams" (Montgomery et al., 2019, p. 2).

As previously mentioned, burnout's contagion effect can see it spread quickly through a care team or organization (Moss et al., 2016). When looked at through the lens of its compounding and double-dose effect, it is not difficult to see how the situation can escalate quickly for everyone involved when it is handled primarily at the reactive level. As we will see below, I will argue, that not only is burnout a social phenomenon, but it is also in fact a relational phenomenon, that once present, creates a cascade of disruptions within the structures surrounding it.

Montgomery et al., (2019) go on to add that burnout is often a shared experience amongst members of health teams in response to "shared job stressors", highlighting the need for a 'third wave' of systemic interventions for dealing with burnout (Montgomery et al., 2019, p. 1). Further to this, they urge that focusing on the problem solely from an individualistic perspective can mask factors associated to *organizational burnout* i.e., wide-spread burnout throughout a site or organization, which would allow maladaptive coping strategies amongst staff to continue and for the root cause of burnout to progress without being tended to until it reaches critical levels (Montgomery et al., 2019).

In addition, as both the symptom and the problem in this circumstance is 'burnout', it can seem as if the problem is being managed simply by the metric of 'reduction of burnout'. Rather, the work of Montgomery et al. (2019) encourages that resources are better invested if put towards "approaches that promote healthy individual-organization relationships"—citing this as a potential "key to preventing burnout" (Montgomery et al., 2019, p. 2)

Thus, to both course-correct and proactively prevent future burnout on the individual level it needs to be addressed at the larger systems/organization level concurrently (indicating the importance of all the individual and organizational interventions mentioned thus far)—this seems to be the only way forward for lasting change. Furthermore, the culture of an organization seems to be the underlying foundation on which any further work on burnout should be built upon. Thus, all levels of the system must be considered simultaneously to get an accurate evaluation.

Montgomery et al. (2019) also encourage continuous evidence-based assessment and interventions based off the structural drivers of burnout that are present for any given team, as the vital next step after burnout has been established and stress the importance of determining interventions tailored to the team (co-designed with their input); they advocate that this is the highest order of prevention (Montgomery et al., 2019).

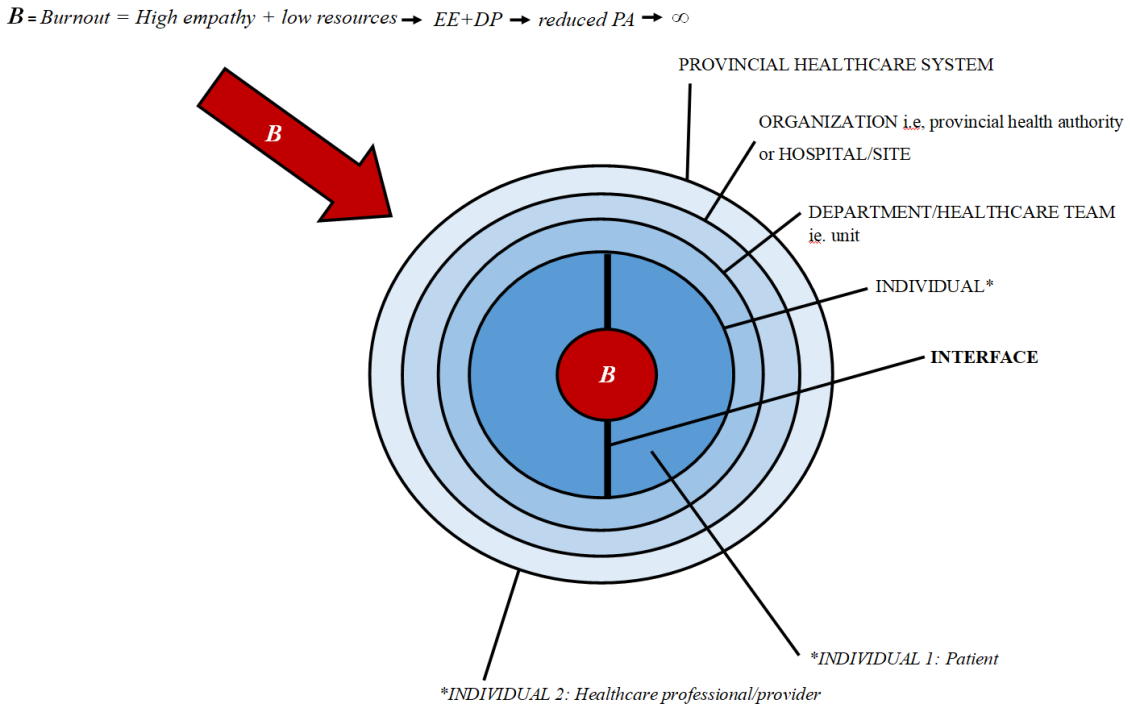
The work of Montgomery et al. (2019) provides a basis for framing a holistic understanding of the problem, and while they do offer a solution based off of the *worklife model*, it does not outline how to assess burnout and team functioning apart from at the individual level via the MBI and at the group level via quality assessments as mentioned above (Montgomery et al., 2019). While an adequate starting off point, I do not believe it allows for a full-scale analysis of systems drivers of burnout via a relational model, especially if burnout is in part due to our relationships at work as they allude to (Montgomery et al., 2019).

It does, however, highlight the importance of triaging the key drivers of burnout at the team level on a continual and ongoing basis (Montgomery et al., 2019). Their work provides an important pivot in the research that should not be underscored as a crucial starting point—I believe a family systems framework might serve to fill the gap via a more refined and comprehensive model than the worklife model offered. The following simplified image should

serve as a guideline for the remainder of the paper and summarize both the burnout and systems theory focused findings till now (Fig. 1).

Fig. 1

Systems theory perspective of burnout in healthcare



This image incorporates the systems within the system burnout impacts and aims to display the intricacies of the potential fallout as mentioned throughout. Further, it adds the 'burnout equation', created throughout thus far. Note: I have chosen to also have the arrow of 'Burnout' pointing towards the concentric circles for two reasons:

1) It displays the outside effect of burnout to the existing systems and,

2) It denotes the collapse of resources being pulled inwards as previously mentioned,

but it would as also be accurate to simply have it be its own subsystem, as the smallest circle at the center as shown (why this is the case will be elaborated on below).

In addition, Montgomery et al.'s (2019) assertion that each unit i.e., medical unit/department/team can be viewed as an independent subsystem, with its own systems drivers, provided a framework to apply family systems concepts to burnout at large, as a way by which to explore the drivers and processes involved.

To do so, healthcare teams were conceptualized via a larger systems theory perspective and further, a group dynamics lens, both as an assessment tool and as an intervention. Furthermore, it allows for the distinct opportunity to view each unit of a site/organization through the lens of semi-autonomous subsystems, whereby subsystems would naturally have varying relationships to each other, affected by organizational structure, physical layout and design, or a variety of other factors i.e., two units that are close in proximity to each other might know each other better than a unit placed on the other side of the hospital; ED and ICU staff might have more cross-over in their work due to increased frequency of patients moving from one unit to the other; staff who work full-time might be closer to each other than part-time and casual staff, etc.

These 'subsystem relationships' create natural pockets of groups/individuals that are closer in their interpersonal dynamics (both in-group and between groups), under the same umbrella of the 'organization' (i.e., subsystem relationships of individuals come together to form a unit, multiple teams/units make up a hospital, etc.). Further to this, coalitions will naturally form between members. This idea will be further explored below when discussing 'chains of influence' and healthcare culture.

As such, all subsytems under an organization can be mapped and the interactions between groups and within group members can be assessed for areas of improvement towards positive working relationships, which in turn can foster a positive work environment, culture, and overall

community for an organization's healthcare setting for patients and staff alike. This provides not only a framework for the hierarchy structure of healthcare, as we will see below, but also provides a way to map out interaction patterns between subsystems. A daunting task, of assessing and addressing the interpersonal drivers of burnout at the departmental level (which in BC alone would be 1000s if not 10,000s or 100,000s of teams), becomes organized through the interactional patterns of family systems theory. Furthermore, the other systems drivers of burnout present i.e., austerity measures, staffing shortages, etc., are also considered via the relational of family systems. This is to say, within family systems, a family is always considered with the overlay of culture and development and how this impacts their relationships with each other and their functioning as a unit, always seeking to contextualize their behaviour and patterns (Gehart, 2018).

Through this framework, we would be able to triage the units that need to be tended to first i.e., the teams that are functioning poorly together. As mentioned, Montgomery et al. (2019) encourages that as part of the systemic approach to burnout, that teams be continually assessed for optimal functioning and burnout within its members, and that this be a part of regular safety measures taken, adding that "medical departments reporting high levels of burnout could therefore be a signal of erosion of hospital safety" (p. 2).

As addressed, the MBI provides a valid assessment tool by which to do this on an individual level, but once 'x' amount of individuals have been assessed as clinically burnout, how do we 'heal' the group as a whole? As we will see below, the systems theory concept of holism provides a foundation for addressing and tending to the group as an entity of its own.

This is pertinent because as we have learned till now, burnout creates more burnout at an exponential rate, thus we need to 'stop the bleeding' and tend to it where there is the most. Once

we have highlighted the urgency of the units with respect to each other, we would now have a chronological order of moving through them in order of priority. This could be done at a hospital or organization-wide level, and with a concerted effort, this could happen regionally, provincially, nationally, or even, globally.

In the following sections and chapter, I will highlight in more detail how burnout in healthcare can be viewed through a group and family systems lens, as occurring within teams that have clearly defined hierarchy, roles and responsibilities, and can be on a continuum of high to low group functioning—operating similarly to a family system (Gehart, 2018). A system where the whole is greater than the sum its parts, and work in concert towards the common goal of patient care.

The shift in the literature on burnout, from an intrapersonal lens of resiliency towards an interpersonal organizational systems approach, suggests that the concept of burnout is being actively redefined at a time when the culture in healthcare is evolving. As mentioned, this will also be impacted by the demands of the current pandemic, affirming that continued attention should be given to the topic for increased growth in the healthcare sector.

Systems Theory and Group Dynamics

If we were to put the burnout equation into context with a systems approach, it would denote that the original equation will always look to create equilibrium via homeostasis:

Burnout = High empathy + low resources → EE+DP → reduced PA → ∞

Therefore, wherever there is burnout, if it is not tended to before it creates more of itself, the system will continue to have its resources leached as it looks to reestablish equilibrium—in turn, 'feeding itself'. A system's tendency towards homeostasis and what this means in the context of burnout in healthcare will be looked at in detail in the following sections.

The literature on *group dynamics* (the study of group function) provides a stable foundation for understanding the behaviours of *groups* i.e., people that spend considerable/consistent time together, through a systems theory lens (Kottler & Englar-Carlson, 2015). This work is based off biologist Ludwig von Bertalnaffy's (1986) "general systems theory" that looked to make sense of how "all living creatures organize themselves and act in predictable patterns" (Kottler & Englar-Carlson, 2015, p. 60). He is also credited with a shift in group theory towards *holism*, the concept that the whole is greater than the sum of its parts (Kottler & Englar-Carlson, 2015).

General systems theory is based off the observation that all systems, regardless of their nature i.e., mechanical, biological, social, function according to the following three basic principles:

1. The whole is greater than the sum of its parts (holism)
2. Systems can be viewed in terms of hierarchy, executive organization, and subsytems
3. Systems strive towards self-preservation and therefore its members/parts work in service of the system as well as themselves (Gehart, 2018, p. 48)

Further to this, cybernetic systems theory seeks to understand how systems continually guide themselves through a tendency for homeostasis and reestablishing *equilibrium* i.e., a cybernetic system naturally steers itself (seeks homeostasis) back to equilibrium through *feedback mechanisms*. In this context, homeostasis is the desire/ability of the system to adjust to its output and control its input accordingly, while equilibrium is its natural resting state that the system is always seeking to return to i.e., no net change (Fischer & Herr, 2019). In the literature these terms are often used interchangeably when referring to the system's desire and/or ability to

return to its resting state, or for the resting state itself. In social systems, this is facilitated through stable patterns of behaviour (Gehart, 2018; Kottler & Englar-Carlson, 2015).

Gehart (2018) note that for both groups and families, this "refers to the unique set of behavioural, emotional and interactional norms that create stability" for the group; they go on to highlight that this is a dynamic and ongoing process that requires feedback to adjust, i.e., "systems must be constantly in flux to maintain stability" (Gehart, 2018, p. 48). As alluded to, this is done through feedback loops.

Negative feedback denotes when a system/behaviour is outside the bounds of homeostasis, i.e., norms are quickly corrected with negative feedback to balance. When negative feedback does not have the desired effect, *positive feedback* i.e., introducing new behaviours to create a new homeostatic equilibrium, is utilized (Gehart, 2018).

In reference to burnout in healthcare, the negative effects of burnout discussed thus far can be then viewed as the systems attempts at course correcting through negative feedback (i.e., the input of being over-extended/under-resourced creates the output of burnout via a net negative loss). As this was not successful, we are now at the stage of incorporating positive feedback into the system i.e., the interventions mentioned thus far, in the hopes of reestablishing equilibrium (i.e.., no net loss between output and input—no output of burnout).

It is interesting to note that it is the very nature of homeostasis and the system's desire to search for stability that has been taken advantage of by burnout. The same mechanism that makes a system agile and able to adapt to its surroundings has been 'hijacked' by burnout, much like a parasite to a host, to feed itself (i.e., the output of burnout shifts the input to create the output of more burnout) (Fischer & Herr, 2019).

This is in part because "systems maintain stability" over time (Kottler & Englar-Carlson, 2015, p. 61). We have seen this to be true of burnout, in which burnout left untreated, creates more burnout i.e., the stability of the system has now been directed towards the output of burnout (note that in the systemic context, "stability" refers to the lack of change).

Group theory further highlights that this notion of homeostasis is consistent within all levels of the group structure i.e., from the highest organizational level to the smallest subgroup/unit (Goldspink & Kay, 2003; Kottler & Englar-Carlson, 2015). Kottler & Englar-Carlson (2015) note that "all groups organize themselves into smaller units, each with its own set of rules or norms that regulate behaviour" (p. 61).

Goldenberg & Goldenberg (2005) add that groups often function through *circular causality* in which "group members' behaviour is simultaneously moving in all directions at once, a continuous series of circular loops or recurring *chains of influence*" (as cited in Kottler & Englar-Carlson, 2015, p. 59).

In turn, these chains of influence intersect at the interface mentioned earlier, within the system of the "individual", between the subsystem of the healthcare provider and the patient. Individual 'healthcare provider-chains of influence' then come together to create a care team which then extends to create a healthcare unit/department. This idea can also extend to the patient, as nestled within their own system/chains of influence on the other side of the interface. For the intents of this paper, we are choosing to focus on the healthcare provider side of this representation.

Social Microcosm Theory

Yalom and Leszcz (2005) provide the framework for understanding group work and the interactions between group members as a *social microcosm.* They advise that over the course of

time, all groups settle into their own homeostasis and equilibrium together, as a function of their interpersonal relationships with each other. As such, given enough time, an individual's interpersonal style outside of the group will eventually come into the group setting, if not present at the onset (Yalom & Leszcz, 2005). For example, an individual might be aggressive when receiving feedback/criticism in their personal life but may not initially present this way on their work team; but, as their comfort level grows with the person providing said feedback i.e., supervisor or team member, their true tendency will become apparent in their reactions (Goldspink & Kay, 2003).

These interpersonal/relationship dynamics then become the chains of influence mentioned above. When overlaid on the literature previously outlined: that healthcare professionals' ability to provide quality patient care is dependent on their high wellbeing and low burnout, and that this is often a function of being well-resourced, including emotionally via positive working relationships and good group dynamics, and further to this, that every professional is nestled within a healthcare team, one can see how burnout can lead to more burnout.

As these relationships and dynamics become more strained over time by an overburdened system, the net negative loss of the system increases exponentially, and as the system looks to rebalance itself, but without the initial loss replenished (i.e., the extra resources absorbed by burnout), this negative feedback and net negative trend will continue both in the absorption of further resources and sustained negative effects of burnout. In time, burnout itself will deteriorate the relationships and structures that the system is built upon (Montgomery et al., 2020).

Without some positive feedback measure that will allow for it to truly recalibrate, it will continue seeking homeostasis via providing the output of more burnout, until a new equilibrium

is achieved (Fischer & Herr, 2019). What that means for our healthcare systems, is still to be determined.

On a singular level, "the individual co-adapts with the environment through continuous…behavioural changes in order to remain viable within it" (i.e., emotional exhaustion, depersonalization, reduced personal achievement as the change to input in response to the output of burnout) (Kottler & Englar-Carlson, 2015, p. 63). At each individual attempt to adjust, a discoordination of each person's chain of influence will create intersecting ripple effects outward. Through this measure, if this happens frequently enough or the loss is not recuperated quickly enough, a once high functioning system can become unsynchronized and *dysfunctional* in its attempt to regain homeostasis back to equilibrium.

At which point, the system will need an intensive and direct maneuver to be realigned with its common goal. For the remainder of this capstone, dysfunctional will be used to describe this process, as in, the group is dysfunctional when it is unsynchronized in its individual attempts to regain equilibrium. *Functional* in this context then, is a team in which the amount of dysfunctional/unsynchronized chains of influence do not meet the threshold to tip the entire subsystem over to dysfunction.

Luckily, Goldspink and Kay (2003) go on to highlight that human social systems are unique in that they offer the "possibility for direct feedback from macro to micro—something [that does] not present in natural systems" (p. 463). Thus, providing hope for healthcare systems that are veering off-course, especially in the wake of the pandemic.

In Chapter 3, the relational-family systems approach towards understanding group dynamics will be outlined as a basis to look for opportunities for feedback from the micro (individual) to the macro (department/unit/site/organization). This will provide the foundation to

advocate for a paradigm shift and future research in understanding viable interventions that may not have been previously considered, both to course-correct as well as to provide protective factors against burnout in healthcare.

Healthcare Culture & Hierarchy

The literature supports the notion that healthcare teams have a unique work setting that is often interprofessional in nature i.e., with multiple roles and various responsibilities, that work together "to operate in challenging and fast paced environments, where accurate decision making, error minimization and innovation are essential in providing excellent patient care" (Grailey et al., 2021). Against this backdrop, the need for trust, clearly defined roles and responsibilities, and group cohesion is amplified (Braithwaite et al., 2016; Grailey et al., 2021; Leggat, 2007; Sims et al., 2015).

Leggat (2007) highlights the importance of interprofessional teamwork and notes that "the division of labour among medical, nursing and allied health practitioners means that no single professional can deliver a complete episode of healthcare" (p. 1). As alluded to throughout, it is through the concerted effort of a healthcare team that a patient is cared for during their hospital visit/stay over their life course.

Further to this, because healthcare teams are comprised of a mosaic of interprofessional roles (i.e., nurses, physicians, and allied staff) that rely on a collective interpretation of each other's roles and responsibilities towards a shared group identity and common goal, this can have consequences for group functioning (Grailey et al., 2021, p. 3). They go on to note how this can then play into group dynamics and communication:

> The interprofessional nature of these teams can comprise of multiple differing interests and opinions that may create challenges in the absence of good communication. Effective

> communication within the interprofessional team is facilitated by team psychological safety, allowing collaborative decision making (Grailey et al., 2021, p. 3).

Furthermore, while this is true across professions and healthcare systems globally, there is little in the way of "formal training in teamwork skill development" during professional education and training before entering the field (Leggat, 2007, p. 1). In fact, teamwork navigation skills are primarily learned on the job, despite the fact that studies show that patient outcomes are dependent on the optimal functioning and cooperation of interdisciplinary teams (Leggat, 2007).

Leggat (2007) notes that although the research supports the notion that teamwork is an essential requirement for high quality patient care, there is still a "limited understanding of how individual health professionals contribute to effective teamwork" (p. 1-2).

However, what is reported to be well-understood is the importance of *psychological safety*, as mentioned above, which is defined as "the shared belief that the team is safe for interpersonal risk taking" (Grailey et al., 2021). Leggat (2007) summarizes:

> Cross-sectional and case studies have suggested that teams with a climate of psychological safety, that encourages high levels of participation toward clear goals, that enable high performance and quality expectations, demonstrate better team performance (p. 6).

In further defining psychological safety, Grailey et al (2021) identify it as the quality of the work environment that allows individuals to be their "true selves" i.e., authentic (p. 2).

In fact, psychological safety has been noted in the literature as the single most important factor in team efficacy, agility, and innovation (Grailey et al., 2021). They add that "in [the healthcare] industry, high levels of psychological safety can be associated with promoting

moderate risk taking and creative breakthroughs" i.e., collaboration and innovation (Grailey et al., 2021, p. 2).

As briefly touched upon earlier, the literature holds that healthcare teams have always functioned under a strict hierarchy (Braithwaite et al., 2016). This is in part, because clear leadership is needed during times of crisis, and thus, a well-defined hierarchy leads to roles and responsibilities that allow for transparent distinctions within members' expectations of each other during these circumstances. While this may be true in some situations, a certain measure of flexibility needs to be afforded to this hierarchical structure, as we will see below.

Further to this, Leggat (2007) notes that education and training for most health professions places emphasis on individual skills and competencies, which means that often professionals will only extend their relationships within the same discipline, creating silos within care teams of the different professions. This in turn can lead to difficulty collaborating as an effective unit (Braithwaite et al., 2016; Leggat, 2007).

Braithwaite et al. (2016) notes that this can create a climate in which individuals tend to stay within their professional 'comfort zones' and will often seek out their own professions for both socializing and advice, forming *interprofessional coalitions* (p. 2). Additionally, the healthcare system itself promotes individual and discipline specific rewards, education and training "which consistently leads to difficulties with collaboration across professions, and reliance on hierarchy to manage coordination needs and mediate conflict" (Leggat, 2007, p. 7).

The research advises that relying on firmly established hierarchy for group functioning in the healthcare setting is also recognized as a barrier against fostering psychological safety (Grailey et al., 2021).

Often, those in higher positions have more freedom to voice concerns or speak their opinions, and in essence 'be authentic' (see above) (Grailey et al., 2021; Leggat, 2007). The result can be that those in lower positions will refrain from "speaking across professional boundaries and may subsequently reduce the opportunity for collaborative learning and error reduction" (Grailey et al., 2021, p. 2). This in turn inhibits effective communication of safety concerns as they arise (Grailey et al., 2021). All of which disrupts the capacity of each healthcare professional and the care extended across the patient-provider interface in service of their patients.

At the extreme end, Darbyshire and Thompson (2018) warn that "lethal subservience and deference" to the inherent hierarchy, which they deem "is endemic [in] health systems" can lead to catastrophic results such as the "600 patients…who had their lives 'shortened'" in the 1990s at Gosport War Memorial Hospital in the UK (p. 1). While a thorough analysis of this event will not be included, it serves to highlight how severe dysfunctional group dynamics can directly result in poor patient care with tragic results. Darbyshire and Thompson (2018) reiterate the following in their call to action: "Nurses at several levels were systematically dissuaded from—and as a group were unable or unwilling—to challenge or question the prescribing practices of a doctor (p. 1)."

They note that the 'status hierarchy' between this single physician and nurses was so fraught that they were told to administer, and not question, the opioid dosage of elderly patients which resulted in the untimely death of 600 patients in total (Darbyshire & Thompson, 2018). Darbyshire and Thompson (2018) note that this level of status hierarchy "seems to affect relationships between doctors and nurses far more than those with allied health staff or others" (p. 1).

Grailey et al (2021) offer that a remedy could be in the way of fostering a positive work environment and culture in which all individuals feel they can voice concerns regardless of their position or authority, without fear of consequences i.e., in which all members feel the same level of psychological safety to speak up. This will be further discussed in Chapter 3.

In addition, Sims et al. (2015) highlight that "shared purpose, critical reflection, innovation and leadership" were four key mechanisms that when present, represented high functioning within interprofessional healthcare teams (p. 209). They advise that shared purpose clarified the group goals and the roles and responsibilities of its members, while the remaining three mechanisms outline what is needed towards this end i.e., critical reflection, innovation and leadership were required to attain and access shared purpose towards the group goals of providing safe and effective care on an interdisciplinary healthcare team (Sims et al., 2015).

As a systems theory, family systems provide a framework for change at all levels simultaneously, therefore it offers an effective and elegant solution for maximal group change at the individual, team, and organizational level by fostering the dynamics that facilitate the ameliorating factors mentioned above. This allows for a framework that still respects the hierarchical structure of healthcare without an over-reliance on it and affords the team the ability to seamlessly function as members change and switch roles. This further highlights the need for additional research in this area.

The literature on family systems, group theory, burnout and healthcare and the interplay of all mentioned is promising as it has been noted that "the connections between and among people are considered the greatest healing forces" (Kottler & Englar-Carlson, 2015b, p. 82).

As a final aside to healthcare culture, I would like make note of the work of Ferguson and Anderson (2021) who in their viewpoint article "Professional dominance and the oppression of

the nurse: The health system hierarchy" eloquently highlight how ingrained gender hierarchies can still impact nurses' ability to provide competent care. The go on to advise that although "nurses are the largest group of healthcare workers", they systematically "continue to struggle to develop political voice" and men still outnumber and outrank women in senior leadership positions within healthcare (Ferguson & Anderson, 2021, p. 31). While a thorough analysis of the themes they present cannot be afforded by this capstone, they highlight an interesting, gendered aspect to the current hierarchy in healthcare. They note:

> Women represent approximately 90% of the nursing and midwifery workforce meaning women, by sheer numbers, should have a larger voice in terms of healthcare delivery. However, medicine has historically been associated with men (i.e., physicians) and although women have increased their representation within this workforce to approximately one third, medicine and nursing continue to be [largely] gendered workforces" (Ferguson & Anderson, 2021, p. 31)

They offer that much of the dysfunctional aspects of heirarchy still present in healthcare in spite of the current knowledge of how this affects patient care, is due to remanent vestiges of the previous patriarchal and gendered eras that ushered in the modern healthcare system (Ferguson & Anderson, 2021). This is of importance because as they note, "oppressed groups exhibit behaviours that are toxic to a workplace" and this can present as in-group aggression as well as out-group hostility, with a "lack of unity, fear of authority and change, low self-esteem and horizontal violence" (Ferguson & Anderson, 2021, p. 31). How this can be addressed will be briefly touched upon in Chapter 3.

I offer this to highlight all the subtle and invisible forces that might be shaping group interactions, between and across disciplines for healthcare teams. This serves as a final piece in highlighting:

1) The importance of tending to group dynamics in the healthcare setting as both a preventative measure and a treatment intervention for assessing system drivers and processes at the departmental/unit/team level.
2) The complexity involved in trying to navigate the many possibilities of underlying mechanisms present between the relationships between individuals and subsystems that might be contributing to burnout.
3) A potential way to organize systems/subsystems in triaging urgency towards mitigating the systems drivers towards burnout.

It is with these points and group dynamics in mind that I propose the following paradigm shift, and in turn intervention(s) that revise the problem through an integrative relational-systems lens. Interventions that considers the details of the individual experience, both for the care-provider and patient, while acknowledging the hierarchical culture of healthcare that creates multi-disciplinary care teams, nestled within larger and larger teams that create a department, organization, and province or country's healthcare systems, are required.

In the following chapter, I will outline how this can be integrated via a family systems inspired framework, not only towards identifying the key system drivers and processes to burnout, but also highlighting possible avenues of change by homing in on the relational aspect of burnout, in a way that is as flexible and nuanced as the problem itself.

Chapter Summary

In this chapter, I have reviewed the existing literature of burnout in healthcare, including the current three factor model of burnout. I have discussed the risks associated with it, both as an indicator of possible burnout in an individual, and the consequences once present. The implications of the effects of burnout were discussed, looking at first the individual, and then as it extends out from their role to the healthcare system at large, including the decline in quality of patient care. The existing interventions were surveyed, at the two current levels of the individual and the organization. In highlighting this literature, the case was made for the need to create a third level of both assessment and praxis: that of the care team/department.

A survey of the work of Montgomery et al. (2019) was provided to understand their call to action for 'organizational change' and to illustrate how the key to unlocking burnout may reside in the quality of relationships experienced by the individual, team, and the organization that encompasses them i.e., health authority. Further to this, the distinction was made that, more than organizational change, the shift needs to be made towards systemic and relational change when discussing burnout, its predeterminants, and solutions.

I briefly outlined how the care team and its group dynamics can be conceptualized through a group theory and by extension, family systems framework. To do so, systems theory, healthcare culture and hierarchy were briefly reviewed to provide a foundational understanding of the topics at hand including the importance of psychological safety.

In the following chapter, I will propose an interpersonal strategy for conceptualizing and mobilizing against burnout in healthcare via a 'two-pronged approach' that can be utilized systematically as both an assessment tool and intervention for healthcare teams experiencing burnout at varying degrees. In turn, this will serve to underscore why our current understanding

of burnout in healthcare needs to be reimagined as a relational problem, not merely a social phenomenon.

Chapter Three:

A Relational-Family Systems Model of Burnout: A 'Two-Pronged' Approach

As the literature has highlighted, towards the common goal of the health of a patient, the ability to play functional versus dysfunctional roles in the group setting has visceral levels of consequence in patient safety and quality of care (see 'Cost and Safety' section above). As we have already discussed, burnout is a multifaceted entity, affecting patients and healthcare professionals, teams, organizations, and geographical healthcare systems in subtle and catastrophic ways.

As we move through the current COVID-19 pandemic, healthcare systems across the world have had their resources pushed to the extreme (Morgantini et al., 2020; Zhang et al., 2021). One such crucial resource being the labour force that keeps our healthcare systems running i.e., the healthcare teams that form a hospital, organization and healthcare system.

We previously discussed how Montgomery et al (2019) provided a basis for understanding healthcare and burnout through the systemic lens of viewing the individual as nestled within a team/department (unit). Further to this, we also touched up how teams come together to create a hospital, organization i.e., health authority, within a provincial healthcare system. This in turn makes up the systems within the system that come together to form 'the healthcare system' as we understand it.

In integrating all the many concepts outlined in the preceding sections, I will seek to simplify the applications of these, at times lofty, theories. The two-pronged approach to conceptualizing and treating burnout in healthcare incorporates the following:

1) Triage and determine drivers: Determine where burnout is present, triage, and discover department drivers.

2) Repair: Promote a clearly defined and supportive team culture.

The remaining sections of this capstone thesis will provide the basis for these recommendations and expand on them accordingly, and in doing so, it will seek to outline a relational-family systems model of burnout. It is important to note, that ideally, both 'prongs' would be implemented concurrently, across multiple teams for maximal impact, in addition to the staff supports of all the current interventions for burnout mentioned thus far, including a positive work culture and supportive community within the organization as a baseline for starting this work.

A Relational-Family Systems Approach

Systemic therapies including family systems, are grounded in the following assumptions:

1) One cannot *not* communicate; all behaviour is a form of communication.
2) An individual's behaviour and symptoms always make sense in the person's broader relational contexts.
3) All behaviours, including unwanted symptoms, serve a purpose within the system, allowing the system to maintain or regain its homeostasis or feeling of "normalcy".
4) No one individual unilaterally controls behaviour in a system. Thus, no one person can be blamed for problems [within a system]; instead, 'problematic behaviour' is viewed as emerging from the interactions between members of the system [or the subsystem and parts of the larger system].
5) Therapeutic change involves alternating the interaction patterns within the system (Gerhart, 2018 p. 73).

The literature clearly identifies that one can "apply family systems ideas to look at the structure of a group [and] its patterns of communication (Kottler & Englar-Carlson, 2015, p. 63). In addition, there is evidence in the literature base to support the notion that an organization and its

structures can be viewed through a family systems lens to better assist its managers and employees via EFAP services (Shumway et al., 2007). While the breadth of this capstone will not allow for a comprehensive survey of all the different modalities available within family therapy, it will call upon some key teachings and theories that will serve to provide a rudimentary framework by which to apply the field to the concepts of burnout. As will be expanded on below, this will serve as a starting off point for future research needed to refine the offerings for true accessibility and praxis.

While the system as a whole entity is considered as separate from just the individual parts, it is just as important to remember that "people take on different roles and tasks, some of which are stable and ingrained and others that are situational and contextual…[and] each group contains a degree of differentiations of roles and tasks among group members" (Kottler & Englar-Carlson, 2015, p. 67). Further to this, as highlighted in the previous section, much like families, healthcare systems and their teams work on a hierarchical structure, with clearly defined roles and responsibilities (Braithwaite et al., 2016; Gehart, 2018).

With a family systems model in mind, the group is considered in how it organizes itself into stable patterns created over time (homeostasis) and how this steers the system/group as a whole towards familiar states (equilibrium) (Gehart, 2018; Kottler & Englar-Carlson, 2015). This basis thus far provides a condensed but comprehensive understanding of why it can be difficult to understand the nuances of the group dynamics that can lead directly to burnout for a particular unit or site (i.e., the masking previously mentioned).

The pattern of relationship webbing created by the chains of influence mentioned in Chapter 2 is reminiscent of extended family structures, especially when viewed through a

genogram, a physical representation of one's family tree on both sides, including a minimum of three generations (Gehart, 2018).

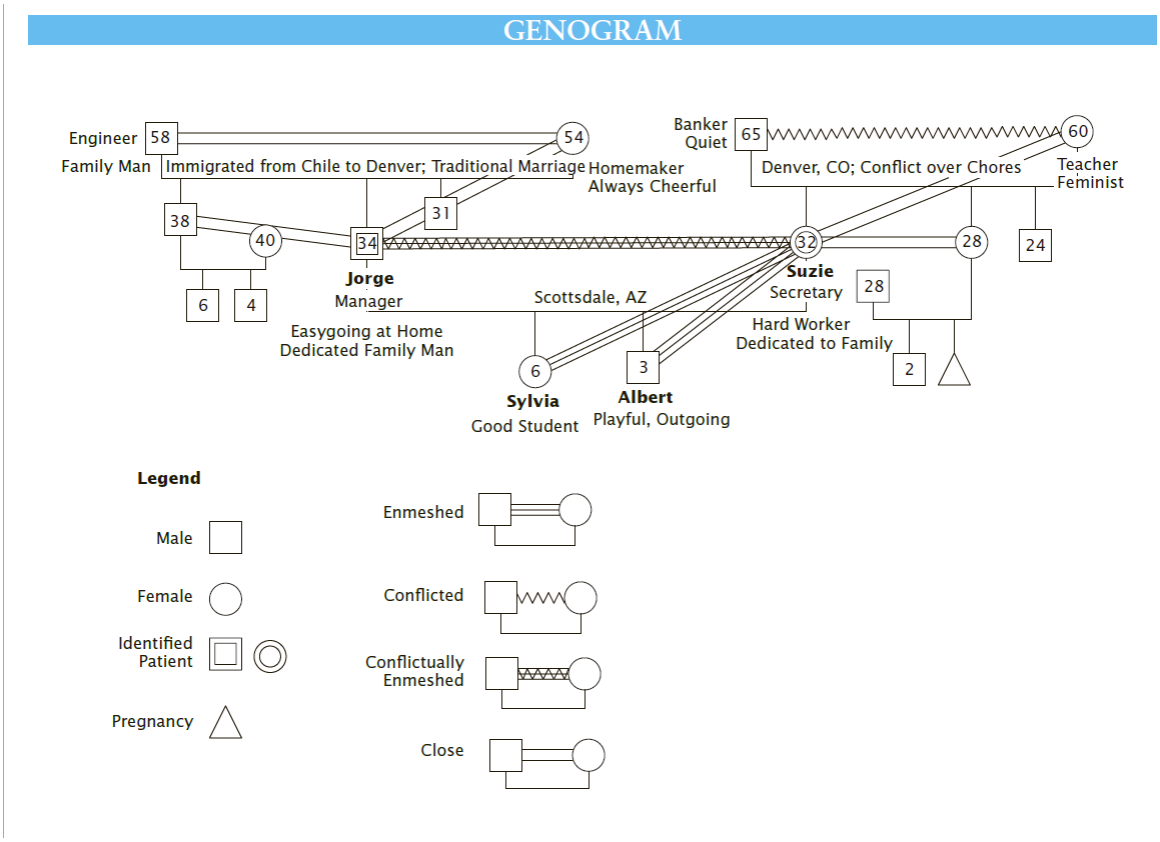
In this analogy, each department/unit/healthcare team would be one 'nuclear family' and its neighboring units would be 'extended families'. Leaders and decision makers would take the 'parental' locations within the genogram (note: this is to only speak to the hierarchy that is present both in the group membership and organization in healthcare), with each hierarchical system/level being akin to a generation i.e., at the unit/department level, leaders would take parental locations, while site and hospital wide leadership taking 'grand-parental' locations (another generation removed) etc. In reality, a department might not look like a nuclear family, but more akin to a 'blended family' i.e., how step-partners and step-siblings etc. might look on a family genogram.

In a traditional genogram exercise, a family is plotted in this way to unearth the unspoken rules and interactions patterns that might not be initially obvious but impact the way in which the subsystems and individuals interact with each other and that govern their daily lives (Gehart, 2018). In turn, one is able to better view both the content of communication, and the *meta-communication* that occurs concurrently (i.e., the context of the content; 'the communication behind the communication') (Gehart, 2018).

Figure 2 provides an example of a genogram. Through this visual way of mapping, one can see the similarities between a genogram and an organizational structure map for a particular site, team or any healthcare system. If overlaying the concepts, it can be a useful aid to conceptualize group dynamics of members that make up a team, the teams that make up a site, and the sites that make up an organization, and could 'zoom in' or out as needed to see the interactional patterns of group members.

Fig. 2

Example of genogram with interactional patterns (Gehart, 2018, p. 417)



Neurobiology and Family Processes

Advancements in technology and neuroscience have given way to our current understanding of the human brain, connection, family processes and group functioning. We now appreciate that the human brain is a social brain, wired to make connections and thrives best when forming close intimate relationships in community with others—the first being our family of origin (Fishbane Dekoven, 2012; Siegal, 2006).

Fishbane Dekoven (2012) describes this as "the mutually recursive flow among body, brain, relationships and context" that occurs during development (p. 553). While this is most vital in our early years, this necessity within us does not wane. In fact, current research is only

further highlighting the importance of this throughout our life course as a continuous "interconnectedness of human neurobiological processes" (Fishbane Dekoven, 2012, p. 554). Moreover, the ability to integrate these parts of self as we develop, seems to directly correlate with our optimal health and well-being (Fishbane Dekoven, 2012; Siegal, 2006).

Fishbane Dekoven (2012) notes: "positive relationships and social supports correlates with physical and emotional health; unhappy or toxic relationships negatively affect health" (p. 554). Our first relationships are generally in our family of origin and is often where we are first exposed to *co-regulation*, the ability of another to help soothe us when distressed. In time we learn the skill of self-soothing or *self-regulation (*i.e., *polyvagal theory)* (Porges, 2018; Pruder, 2019). These early learned patterns, about how to regulate our nervous systems in the face of a stressor, can then enter into our social microcosm as adults—and in an occupation that deals with a tremendous amount of stress and/or loss, individual strengths and weaknesses in this area can be exacerbated, especially within the group setting.

In addition, Siegal (2006) notes that similar behaviours and functioning of members found in groups and families may point to an unconscious, shared internal state. Which further bolsters the use of a family systems informed framework for understanding burnout via a relational model. Furthermore, as the work of a healthcare professional is inherently relational in nature i.e., providing care to a patient via other professionals of a care team, and is facilitated through systems, subsystems, an image of burnout as a relational symptom, as a function of our social brains, can start to be formulated. The distinction here being that it is not just a symptom of our social brains and shared states (i.e., not just a social phenomenon as suggested by Montgomery et al. (2019)); but a symptom of our social brains, in an interprofessional group environment that is providing care within a burden healthcare system, that is under-resourced

and over-extended, and that it is the interplay and relationships between all of these factors and individuals that seems to be contributing to the global rise of burnout in healthcare.

Satir's Family Therapy Model

Virginia Satir's theoretical orientation has withheld the test of time as a classic family systems framework (Banmen, 1986; Gehart, 2018; Kottler & Englar-Carlson, 2015). She was an early adopter of general systems theory and helped shape the movement of family systems from a modality of counselling towards "a unique philosophical view of human behaviour" (Gehart, 2018, p. 47).

Satir's Model of Family Therapy has often been called "the communication system" but it should be clarified that this in reference to the emotions behind a person's pattern of communication (i.e., the emotional meaning associated to both the communication (content) and metacommunication (context)) (Banmen, 1986, p. 481). She is quoted as stating that "communication is the largest single factor determining what kind of relationship one makes with others and what happens to one in the world" (Satir, 1972, p. 30 as cited in Banmen, 1986, p. 483).

Satir's (1972) seminal work on family systems identifies four roles/behaviours that undermine good communication and disrupts the optimal functioning of a group in the face of a crisis, conflict, or an otherwise emotionally charged event: *placating, blaming, distracting/deflecting* and being *super-reasonable* (Banmen, 1986; Kottler & Englar-Carlson, 2015). Kottler and Englar-Carlson (2015) highlight that "these typical dysfunctional roles in families often occur in groups" as well.

In essence, when a group manages adversity by fulfilling any of these four roles, which often occur in tandem pairs of blaming-placating and distracting/deflecting-super-reasonable, the

group as a whole are being moved away from their equilibrium of optimal functioning (i.e.., effective communication, high psychological safety, etc.). As a consequence. the systems seeks to reestablish homeostasis/equilibrium, and any unresolved feelings to do with either the metacommunication, communication, or both can foster unsafe environments, for patients and staff alike (i.e., if instead of resolving the conflict/crisis, the issue was dealt with via blaming others, placating the blamer/aggrieved party, etc. (Gehart, 2018; Grailey et al., 2021). In essence, these roles and behaviours actively work against good team dynamics and psychological safety and erode trust between team members.

Through this model, there are also constructive roles that individuals can be supported through and coached on instead to create and promote better group coherence, in a mutual effort towards group processes and goals, which include but are not limited to: the facilitator, gatekeeper, compromiser, energizer, information seeker, and/or evaluator (Kottler & Englar-Carlson, 2015).

It is important to note that these roles are fluid and not set for an individual or context, and thus, provides hope for interventions that could either prevent dynamics that lead towards burnout, or serve to buffer/ameliorate any existing high propensity for burnout within a particular high risk group i.e., ensuring good group dynamics within critical care teams. Further to this, Satir's model believes that the aim of therapeutic intervention is to:

> expand, redirect, and reshape individuals' ways of coping with each other and themselves so they can [relate to each other] in more healthy ways. Problems are not the problem. Not coping is the problem (Banmen, 1986, p. 489).

The naming of roles as 'dysfunctional' versus 'functional' is not to place blame on any one member (in part because systems theory denotes that no individual functions independent of the

system), but rather it highlights than any so-called dysfunction, and appearance of accompanying roles/behaviours, are systemic in nature i.e., it is not an individual problem, it is a systemic problem (Banmen, 1986). Intrinsic to this is the notion that all individuals are equally part of the system, and naturally create smaller subsytems within i.e., coalitions (as previously discussed) (Banmen, 1986; Gehart, 2018). This is something important to keep in mind when considering the subsystems within the subsystems for the department/team being assessed.

In addition, the Satir Model advises that all individuals have the inherent ability and resources needed to help the system move towards optimal functioning, which is characterized by when all members are communicating congruently with each other. In the Satir Model when there is a breakdown in communication (i.e., rigidly top down leading in incongruent communication below that level of hierarchy) one can see how this climate could eventually create dysfunctional communication patterns between various group members when repeated over time, which could all disrupt the homeostasis of the team.

Banmen (1986) notes that through this model, “the process of disconnecting a family from its dysfunctional communication patterns includes taking a closer look at the family rules” (p. 488). In the context of healthcare, the “rules” would be those outlined by the roles and responsibilities of the interdisciplinary teams that make up a healthcare team/unit. Further to this, the heirarchy of those roles would dictate the organizational structure of the team, adding another set of rules by which the group would be organized (Braithwaite et al., 2016; Gehart, 2018).

With this model in mind, once again we can see how an increase in the number of healthcare team members playing dysfunctional roles, and/or a decrease in those playing functional roles, can shift the equilibrium for the whole team, creating a natural ripple effect as the system seeks homeostasis. This poses the question of if this could one way in which burnout

can breed more burnout when not tended to in a timely manner, and second to that: does the key to unlocking burnout lie in investigating and nurturing our relationships as healthcare professionals, between team-members, between the individual and the organization, and even between the individual and their vocation?

Montgomery et al (2019) highlight (see "6 areas of match" above) that community uniquely matters when discussing burnout, as they argue that burnout is in large part due to the relationships at work. Further to this, moving in harmony, and furthermore, in synergy with congruent communication, with the members of our teams, that eventually make up an organization, fosters leading by values and "motivates connection between the worker and the workplace" noting that the opposite is true when you have "a feeling that the work that you have to do is far away from what you want to do", which can all put an individual at a higher risk of burnout (Montgomery et al., 2019, p. 3).

Brand et al. (2017) further advocate for whole-system changes at all levels. In their systematic review of "Whole system approaches to improving the health and wellbeing of healthcare workers", they found that approaches that simultaneously provided and facilitated both bottom-up (i.e., staff) and top-down (i.e., leadership) engagement and support showed "significantly less deterioration in the perceived organizational climate" (Brand et al., 2017, p. 21).

Prong One

In this section I will outline the application of prong one of the two-pronged approached for a relational-family systems model of burnout. As mentioned, ideally, this would be done in tandem with prong two for maximum impact of results across an organization, provincial healthcare system or national healthcare system.

Triage and Determine Drivers: Determine Where Burnout Is Present and Triage

In line with Montgomery et al., (2019), the initial recommendation, is to assess for burnout as part of routine quality and safety assessments, with the aim to be continually assessing at the departmental level. Furthermore, determine if burnout is widespread for an organization, site, or hospital and use individual MBI assessments to determine which units' staff are frequently reporting high MBI scores.

In an extreme case where all staff within i.e., a hospital or organization are reporting high burnout, it would be important to triage which teams or departments needs to be tended to urgently, and then an assessment of the drivers at the team level needs to be determined, because how burnout impacts each team can and will vary—furthermore, it needs to be determined how burnout is exacerbating the team dynamics for any given department and their support systems.

The initial triage could be done via a number of assessment markers and would need to be determined by the context of the situation but could include quality and patient assessment markers including high error rates, departments with high/frequent turnover, etc. However, if all of these indicate contradictory results, or that all departments are in urgent need of attention, then the recommendation is to skip to the step of determining the department level interpersonal drivers first. In doing so, it will become apparent which departments can be tended to 'easily', and which teams need to be tended to urgently, and thus triaging will become a function of determining the department drivers.

To do so, I propose that a genogram be utilized to map interaction patterns between team members to start to understand where support can be best utilized. This could be done through a combination of interviews and observations to determine how burnout is aggravating group dynamics, psychological safety, trust and support on care teams (i.e., Is burnout further breaking

down team interprofessional communication? Is there one particular leader who is providing feedback in a harsh and criticizing way that is further demoralizing staff? Is there an abuse of power? Is there enough psychological safety on the team? etc.).

The Satir Model mentioned above could be one lens by which to map the interaction patterns of staff (i.e., staff predominating in functional roles versus dysfunctional roles and then supporting accordingly), an alternative is *The Circumplex Model* outlined below.

Circumplex Model. The Circumplex Model of Marital and Family Systems was originally created out of a need to integrate theory and practice (Olson, 2000, p. 144). Olson (2000) notes that it is especially valuable for "relational diagnosis" because of its system-focus and its integration of "cohesion, flexibility and communication" as it's three main tenets, which have repeatedly been noted in the literature as highly important factors for group and family functioning (p. 144). Olson (2000) cites that when these three factors are balanced, the system itself is more functional—when any or all of these factors are misaligned, the dissonance within the system quickly creates dysfunction.

While some of these themes have been previously discussed and defined (i.e., congruent communication, a balanced system, dysfunction with a system) and will not be reiterated here, a few are important to note. *Cohesiveness* refers to "how…[the] system balance[s] the separateness of their members versus togetherness" (Olson, 2000, p. 145). In essence, how does the system balance the autonomy of its members along with its shared group identity and group function? In the healthcare setting, how does the healthcare professional maintain their individual autonomy while contributing to and engaging with the group identity, culture, and larger community of the organization without losing oneself completely to it (becoming enmeshed with it)?

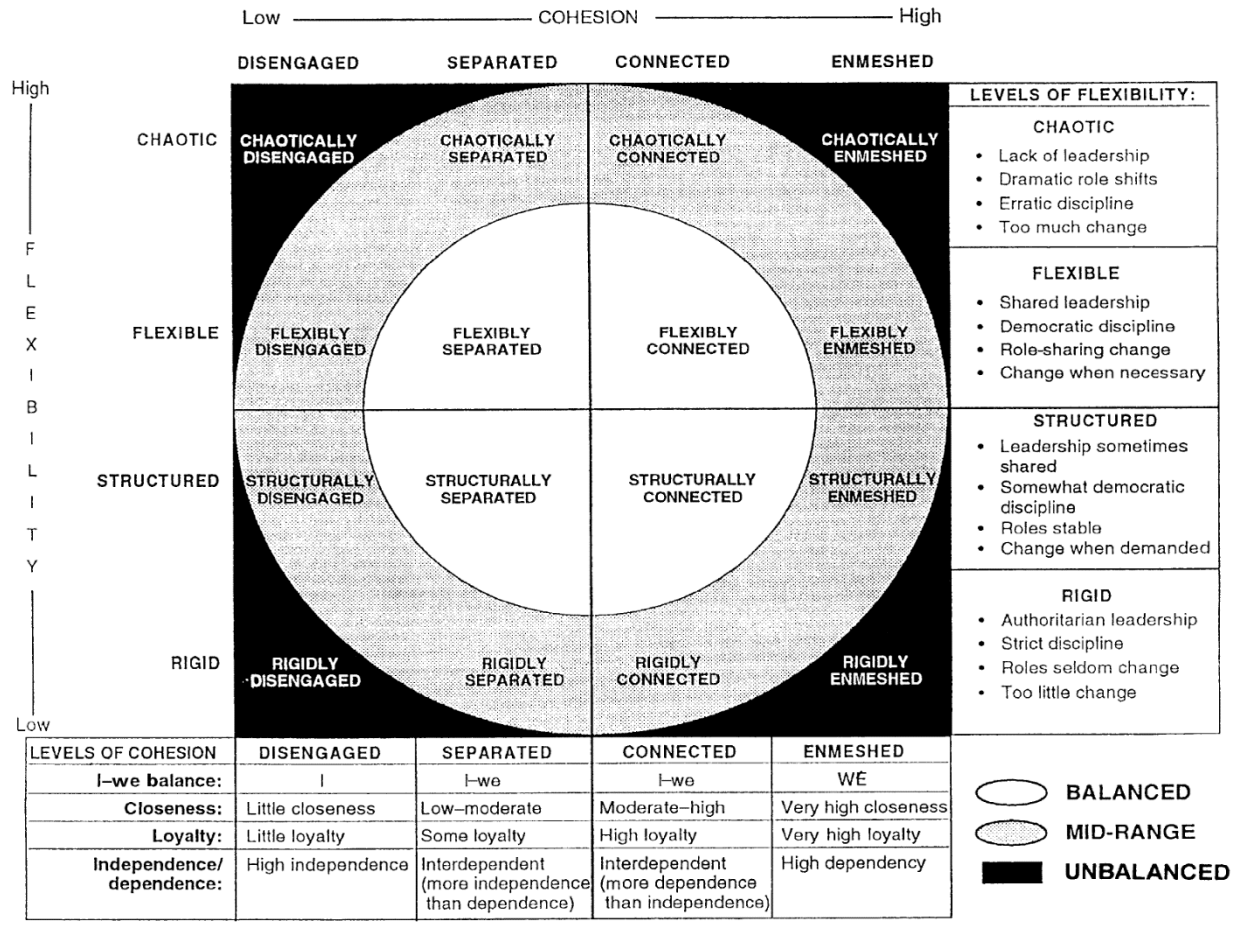
Flexibility is the amount of malleability and change that is afforded in the roles, responsibilities, and especially, the leadership hierarchy of a team at any given time (Olson, 2000, p. 145). Within the healthcare context, this could be whether the team has enough flexibility that the roles, responsibilities, and hierarchies of the team are fluid but stable enough to both support the team through crisis and allow for innovation and learning in times of prosperity as well as from mistakes. In contrast, the tragedy at Gosport War Memorial Hospital could be evaluated as a result of a lack of flexibility resulting in a strict top-down hierarchy.

This model predicts that all three factors (cohesiveness, communication, flexibility) exist on a continuum (see Fig. 3 below) and that optimal functioning of the group as whole happens in the central zones away from any extremes i.e., the group is not chaotically disengaged or enmeshed, nor rigidly disengaged or enmeshed; the group is not chaotically separated or connected, nor rigidly separated nor connected, etc.

A central strength of this model is that it incorporates three of the clinically validated pillars needed for optimal family/group functioning in one succinct model while allowing for a great degree of variance (Olson, 2000). By permitting different states within the central zones (the group can be either flexibly separated, flexibly connected, structurally separated, or structurally connected to be balanced) it is both culturally sensitive and fluid enough to allow for natural ebbs and flows, and thus allows the model to be extended to a variety of global platforms, work cultures, as well to be adaptable to different work teams depending on the location and/or service provided, and as team members naturally change.

Fig. 3

Circumplex Model: Family Mapping (Olson, 2000, p. 148)



LEVELS OF COHESION	DISENGAGED	SEPARATED	CONNECTED	ENMESHED
I–we balance:	I	I–we	I–we	WE
Closeness:	Little closeness	Low–moderate	Moderate–high	Very high closeness
Loyalty:	Little loyalty	Some loyalty	High loyalty	Very high loyalty
Independence/ dependence:	High independence	Interdependent (more independence than dependence)	Interdependent (more dependence than independence)	High dependency

Thus, the genogram could have the interaction patterns of the Satir Model's four roles, and/or could be done in way that highlights which members contribute towards the groups as whole being balanced via the Circumplex Model in the areas of cohesion, communication, and flexibility. The Satir and Circumplex Models provide just two examples of how family systems frameworks can be applied to burnout and systems theory to both triage and determine department level drivers, but similar concepts would likely be applicable with any number of models. Future research would need to be conducted to better understand how to narrow down

choice from the many options and how to determine the most cost-effective, time efficient and effective solution. It may even be the result that the model might change from one organization, or healthcare system to the next, but cannot be discerned without considerable concerted effort towards the cause.

In the case in which drivers needed to be determined before the triage, I believe a holistic choice such as the Circumplex Model should be utilized, as it would allow for a snapshot of group functioning, thus the teams that are functioning outside of optimal zones, and are in high risk areas (ED, ICU, Palliative, etc.) could then be prioritized accordingly. Alternatively, any departments or teams that seem like it would have a 'simple solution', could also be prioritized for efficiency i.e., a team in which one leader is in clear abuse of power and needs to be let go.

At the end of 'prong one', we should have a way of sequencing which teams to support in order, and what department level relational drivers of burnout are exacerbating organizational burnout, and in turn are eroding team dynamics and psychological safety.

Prong Two

Counselling often holds the notion that "it is not the rupture that matters, but rather the repair". That is to say, it is not the disagreement or conflict between two people that is a testament to their relationship, but the strength in which they are able to come together after the initial conflict that speaks to the strength of their relationship. Once burnout has been deemed widespread in a team, the team needs to repair and heal, together.

Repair: Promote and Support a Clearly Defined Team Culture

It is in repairing these relationships that the true value of this relational model lies. Once interaction patterns that are deemed harmful towards group functioning are identified in the previous step, those relationships and patterns should be addressed first and foremost. The group

should then be tended from the ‘center out’ i.e., those affected the most to those affected the least by negative interaction patterns exacerbated by burnout. As family systems frameworks supports no one member functions in isolation, and thus, all members will be affected in some manner, it is likely, however, that some members will be affected more acutely than others. This could be done in a number of ways, and likely, the group will need a combination of healing interventions. For example, through one-on-one counselling for those that are most impacted, team workshops and psychoeducation on related topics (i.e., group cohesion, psychological safety, effective communication, flexibility, critical reflection, etc.), team activities outside of work that focus on team building (escape rooms, obstacle races, etc.). A few additional recommendations for counselling in particular will be made at the end of this section.

If the interpersonal injury exacerbated by burnout is interprofessional in nature, there is even more importance in all professions participating in this sort of holistic team repair. This would also be the appropriate time to address any lateral violence that might be occurring within the same professions as mentioned by Ferguson & Anderson (2021). This would need to be handled delicately, and ideally, by an ally of the same profession. Whether this was done through a mentorship route or a larger group psychoeducation model would depend on the severity of the situation.

Regardless of the specific circumstance, the overarching goal is to create unity and reflection, and to facilitate and recalibrate a positive team environment for the unit, tailored to their specific culture i.e., the ED will have a different spirit to Labour and Delivery, within the same hospital. While ideally this would be done on a continuous basis as a preventative measure to burnout, as a secondary step, it can be utilized as a positive feedback measure, encouraging the system back towards a positive homeostatic equilibrium.

This should be done with an intentional effort towards building off of the support and values of the organization at large. As a next step, the team should then determine what their particular core values and culture are that draw staff towards that department specifically—this could be done in a workshop style 'values activity'. This encourages building relationships with each other not only on the shared values that are broadly overarching such as "healthcare", "nurse", "physician", or what drew them to the organization at large, but rather, in getting specific about what called someone to that particular unit/department or hospital site, and thus, reconnecting staff back to their team members and their shared sense of purpose with both their vocation and shared goals. In effect, this can personalize their experience of work, the work setting and their colleagues that burnout might have depersonalized and can start the healing for the team as a whole.

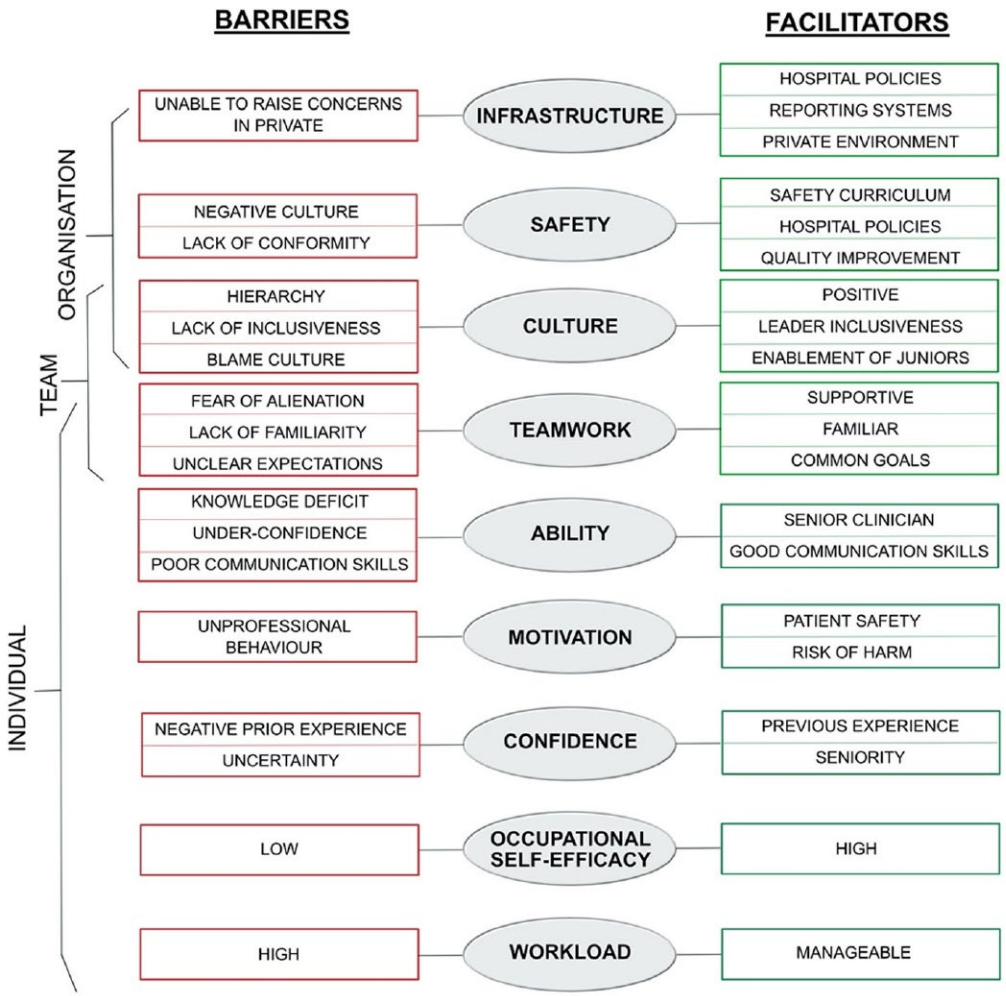
This work needs to be done with support and rigorous buy-in from the department leadership. Grailey et al. (2021) note that psychological safety needs to be established by unit and department leaders, role-modeling supportiveness and collaboration and advise that the difference can be subtle: low psychological safety is highlighted by when the group relies on hierarchy and "supportive seniors" for functioning (i.e., if either is not present or is disrupted, the team becomes entirely dysfunctional and uncoordinated) versus higher levels of psychological safety is "demonstrated by supportive leadership and shared goals within the team" (Grailey et al., 2021, p. 7).

They conclude that higher psychological safety creates an environment that allows for "learning from failure" (Grailey et al., 2021, p. 8). Thereby, allowing for and acknowledging the humanness inherent in all of us, and the best of intentions that most healthcare professionals have when treating their patients.

Figure 4 from Grailey et al. (2021) summarizes "The barriers and facilitators to psychological safety" across the three levels of "individual", "team", and "organization" (p. 9). While the top and bottom nodes of "infrastructure" and "workload" are generally deemed at the level of the hospital/organization, the remaining nodes are all concepts that can usually be fostered at department/healthcare team level. It is at these nodes that I believe a relational framework can facilitate the removal of barriers.

Fig. 4

The Barriers and Facilitators to Psychological Safety (Grailey et al., 2021, p. 9)



Essentially, depending on the context of the group's dynamics that need to be tended to, any or all of these factors can be addressed: safety, culture, teamwork, ability, motivation, confidence and occupational self-efficacy. As mentioned, ideally, this is done on a continual, proactive basis as a protective measure against burnout or at the very first indications of it being present in a group.

In terms of counselling, as mentioned, one on one counselling can be offered for team members as needed and can be accessed via the organization provided EFAP services; a group counselling model could also be utilized with the group at large if this is deemed necessary and/or valuable. This would likely depend on the group, as some groups would likely find it more difficult to discuss the themes and conversations of counselling in the company of others. For others, this in itself could be a healing experience.

In addition to talk-therapy, outside of the literature on burnout, *Eye Movement Desensitization and Reprocessing Therapy (EMDR)*, which uses bi-lateral stimuli often in the form of a light or sound moving from left to right, has been shown in numerous studies as being a more cost and time-effective solution in dealing with the symptoms of PTSD than other forms of therapy, including therapist-directed flooding (Stickgold, 2002).

The work of Maçorano et al. (2021) offer a promising future avenue as they are currently conducting patient trials for a new app that can be used at the user's discretion, that incorporates EMDR with the MBI testing benchmarks to treat burnout in a more accessible form. This is especially salient in light of the findings of Morgantini et al. (2020) and Zhang et al. (2021) that PTSD in healthcare professionals will likely be on the rise as a result of the pandemic. This further highlights the importance of continuously seeking out future research in burnout, in all avenues.

By the end of 'prong two', the team should feel reconnected to their shared purpose, goals, team identity, core values, and most importantly, to each other. While the use of 'family systems' might indicate that all members of a team must be 'close' to each other, I would offer this counter-argument: you can love, accept, and be civil with all of your family members, and not like and want to spend considerable time with some of them. The end result of 'prong two' is much of the same type of acceptance if there is a clash of personalities present: acceptance, civility, and a shared 'love' of the other's commitment to their vocation rooted in shared purpose.

Limitations To This Capstone

As alluded to throughout, in order to put this two-pronged approach into praxis, much research needs to be done to investigate the most cost-effective and time efficient approach. As I have outlined some possible avenues for future research to explore, I acknowledge, that the areas of "burnout in healthcare" and "family systems frameworks" alone are vast in their literature, and thorough research needs to be conducted to better understand: how to best apply relational-family systems theories to burnout, if one modality is an obvious choice over another, if an eclectic choice allows for more flexibility, and if the modality should change depending on the context? All of these questions and more should be addressed in future research.

In addition, as a systemic problem, burnout will continue to change the landscape of healthcare in the coming years, as we have already seen in its short-term effects due to the COVID-19 pandemic. As systems theory has taught us, until the feedback of the system no longer creates the output of burnout, we will continue to see the rise of burnout for healthcare systems worldwide.

The ‘two prongs’ can be administered both systematically and concurrently and repeated as needed in order for the system to reach an equilibrium in which the output of burnout no longer produces the input of burnout i.e., in which burnout is no longer part of the system.

I acknowledge that this is not an easy task, and the recommendation is both time and labour intensive, requiring considerable engagement and coordination. However, I do so with the thought in mind that a radical maneuver is now needed in order to course-correct our healthcare systems, and that without, grave consequences loom ahead. The time has come for a contemporary path forward in our shared healing, and for boldness to lead the way.

Chapter Summary

In this chapter I outlined a relational-family systems approach to assessing, triaging and addressing burnout in healthcare teams. This included a description and outline of a ‘two-pronged’ approach to healing teams impacted by burnout at the departmental level by determining the team relational drivers of what may be exacerbating the effects of burnout and how the team can repair and be realigned towards their shared purpose. Ideally, this ‘second prong’ would be happening on a continual basis as a protective measure against burnout.

I showcased that this intervention is to be used at the team level and is encouraged to be used concurrently in a coordinated manner across a hospital, site, organization and/or healthcare system. This is on the basis that burnout in healthcare is a systemic problem and erodes the relationships with that system and the structures it supports, with the final consequences being to the safety and care of patients.

Furthermore, I highlighted that while the first two sections of this intervention go hand-in-hand, assessment and repair/realignment should be happening on a continual basis in order to both course-correct in an ever-changing healthcare system, to catch burnout early, and to

ameliorate against burnout. I also recommended that in addition to talk-therapy, EMDR be considered for the collective trauma that healthcare professionals have experienced in the face of the current COVID-19 global pandemic.

Lastly, I highlighted that future research needs to be conducted to better understand burnout as a systemic and relational concept and how it can be applied to a relational-family systems framework in order to be cost-effective, efficient and flexible. In doing so, I hope to have illustrated the need for a profound paradigm shift both in the conceptualization and solutions of burnout in healthcare as it is currently understood.

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